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CONTENTS OF VOLUME VII.

Pages.

1.—THE SILVER SITUATION IN THE UNITED STATES:
By Professor F. W. TAUSSIG, LL. B., PH. D.
I. The Economic Situation................ 1–118
II. The Argument for Silver................

2 and 3.—ON THE SHIFTING AND INCIDENCE OF TAXATION:
By Professor EDWIN R. A. SELIGMAN, LL.B., PH.D. 119–310

4 and 5.—SINKING FUNDS:
By Professor EDWARD A. ROSS, PH. D.......... 311–416

6.—THE RECIPROCITY TREATY WITH CANADA OF 1854:
By Professor F. E. HAYNES, PH. D....... 417–486

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THE SILVER SITUATION

IN THE

UNITED STATES.

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THE SILVER SITUATION

IN THE

UNITED STATES.

BY

F. W. TAUSSIG, LL. B., Ph. D.,

Assistant Professor of Political Economy in Harvard University.

AMERICAN ECONOMIC ASSOCIATION,

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TABLE OF CONTENTS.

PART I.—THE ECONOMIC SITUATION.

I.—The Act of 1878. PAGE.
- Provisions of the Act........................ 8
- Silver Certificates........................ 9
- Causes of the Act........................ 10
- Wherein peculiar........................ 12
- Expected Effects........................ 13

II.—The Silver Circulation........................ 15
- Position of the Eastern Banks........................ 15
- Explanation of the Chart........................ 17
- Regular Autumnal Increase of Silver Circulation........................ 18
- Limited Circulation of the Dollar coins...... 19
- Four periods in the History........................ 21

III.—1878–1884.
- First Coinage and Circulation........................ 21
- Large Certificates return to the Treasury.... 22
- Upward Movement in 1879–'81........................ 23
- Treasury offer to carry Silver West free...... 24
- Prosperous Conditions of this Time.......... 25
- Consequent increase of Silver Circulation... 26

IV.—1885–1886.
- Crisis of May, 1884........................ 28
- Silver Circulation ceases to grow........................ 28
- Explanation of this........................ 29
- Treasury Gold Receipts and Holdings shrink. 30
- Policy of the Treasury........................ 31
- Effort to get out Silver Dollars........................ 32
- Redemption of Public Debt ceases........................ 33
- Hoarding of Silver........................ 34
- Made possible by Surplus........................ 34
- Banks lend Gold to the Treasury........................ 35
- Suspension of Gold Payments feared........ 36
- Position of the Greenbacks........................ 37
- The Gold Reserve of 100 millions........................ 38
- Embarrassment ceases in 1885........................ 39

V.—1886–1890.
- Decline in the Bank-note Circulation........ 40
- In what way it takes place........................ 41
- Small Denominations of Silver Certificates authorized in 1886........................ 43
- Revival of Business, 1886........................ 44
- Growth of Money in Circulation, 1878–1890.. 45
- Rate of Growth and Annual Increment..... 47
- How much additional Money the Growth of the Country calls for........................ 49

VI.—The Act of 1890.
- Provisions of the Act........................ 50
- Amount of Monthly Issues........................ 51
- Change in the Policy of the Banks.......... 52
- Decline in the Gold Reserve, 1890–'91....... 54
- Customs Gold Receipts shrink........................ 55
- At first, ready Circulation of the New Issues 56
- Barings' failure, and Crisis of November, 1890 57
- Silver becomes redundant in 1891........... 58
- Relief to Treasury from changed attitude of the Banks........................ 59
- Outflow of Gold, 1891........................ 60
- Prospects in the Autumn of 1891........................ 60

VII.—General Conclusions. PAGE.
Silver Issues have followed, and not caused, rising Prices.......................... 62
Bearing of this fact on the Theory of Prices. 63
Effects of Bank Deposits.................... 64
Analogy of Silver Currency to Subsidiary Coins.................................. 65
Silver Issues under Act of 1878 not excessive. 66
What would have happened, if no Silver.... 67

VIII.—The Probable Future—Free Coinage.
Bank notes will shrink for a few years more. 68
Possible Effects of Use of New Notes in Bank Reserves...... 69
The Issues of 1890 probably excessive........ 71
A Gold Premium eventually probable........ 71
How a Gold Premium may be reached...... 72
No Contraction from a Gold Premium....... 74
Possible Effects on Credit.................. 76
The Financial Position of the Treasury important.......................... 76
The Sale of Bonds to maintain Gold Payments 77
A Permanent Breakdown can come only from a Foreign Drain of Gold.............. 78
Eventual Rise of Prices under Silver Standard 79
Probable Effects of Free Coinage............ 81
Early Breakdown of Gold Payments........ 82
Slower Effect on Prices.................... 83

PART II.—THE ARGUMENT FOR SILVER.

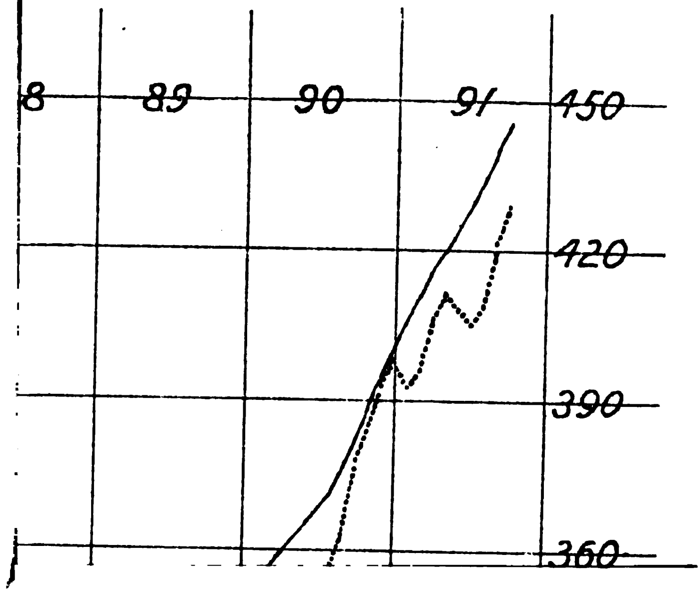
I.—The Bimetallist Argument.
The Argument from Falling Prices.......... 85
The Burden of Debts increased.............. 86
Depression of Industry alleged.............. 87
Is the Silver Dollar dishonest?............. 90

II.—The Effects of Improvements in Production.
The Fall in Prices at first denied............ 91
Then ascribed to Improvements............. 93
The Appreciation of Gold not so disproved.. 94
Real Bearing of Improvements.............. 95
Inverse movement of Wages and Prices..... 96
Case different from that of a Simple Fall in Prices.............................. 97
Improvements and Depression............. 98

III.—The Case of the Farmer.
Improvements affect Agriculture differently from Manufactures.................. 101
Effects of Agricultural Improvements....... 102
Causes of Agricultural Depression........... 103
Transition in Agricultural Methods......... 105

IV.—Silver and Gold as Standards of Value.
Negative Reasons against use of Silver...... 106
Positive Reasons. The Effect on Creditors.. 107
The Increased Production of Silver......... 108
Difference between Gold in 1850 and Silver now 110
Gold a satisfactory Standard of Value....... 111
The *morale* of Silver Agitation............. 112

V.—The Expansion of the Currency.
The Growth of the Currency............... 113
Increase of Bank Deposits................. 114
Sufficient Gold for Bank Reserves........... 115
How to secure Growth of Large Change..... 116
Proposal of Mr. Fairchild on Silver......... 117


8
89
90
91
450
420
390
360

P

The Silver Situation in the United States.

PART I.

THE ECONOMIC SITUATION.

I.—The Act of 1878.

A discussion of the silver situation in the United States divides itself naturally into two parts. On the one hand, we have the purely economic aspects of the problem,—the working of the silver legislation, its history, the results that have flowed from it in the past or may be expected in the future. On the other hand, we have the intricate and difficult questions of policy involved,—the right and wrong of the legislation, the evils or benefits that have ensued and may be expected, the best course to be followed in view of all the emergencies of the situation; the treatment of the problem not only from the economic, but from the wider social and political point of view. Here, as in almost every subject which the economist has occasion to examine, it is advantageous to distinguish between these two classes of considerations. Accordingly, the present monograph will discuss them separately, undertaking first an examination of the economic phenomena, and proceeding thence to a discussion of the questions of policy.

The economic discussion may begin with a sketch of the history of legislation, which can be disposed of very briefly. It is not necessary to go back further than the act of 1878, familiarly known as the

the time it does not seem to have been expected that the silver certificates would enter directly into the circulating medium; we may infer from the restriction to large denominations that no such expectation was entertained. But in fact, it has been chiefly in the form of certificates that the silver has entered into circulation. These certificates, it is true, are not, like the dollars themselves, a legal tender; but they are receivable for all public dues, customs included, and they pass from hand to hand at least as readily as the bulky pieces which they represent. The government pays them out directly, retaining an equal amount of silver dollars in its vaults, and treating these as a special deposit by the holders of the certificates. The quantity of actual coined dollars which the community would use reached an early and stubborn limit; but in the form of certificates, much wider play was given to their use. The dollars and certificates between them constitute what we may call the silver currency of the act of 1878.

The passage of that act was due to causes easily described. It was part of the opposition to the contraction of the currency and the resumption of specie payments, which forms the most important episode in our financial history between 1867 and 1879. The resumption of specie payments had been provided for by the act of 1875, and was to take place on January 1, 1879. In the meanwhile, the long-continued depression which followed the crisis of 1873 intensified the demand for more money and higher prices. That demand led to the inflation bill passed by both Houses of Congress in 1878, and killed by the veto of President Grant. The same

feeling led to the silver act. The great fall in the price of silver, beginning in 1873, and showing itself markedly in 1876, made silver, at the old ratio, a cheaper currency than gold, and so caused the opponents of the return to specie payments to prefer silver to gold, as they preferred paper to either. No doubt some additional force was given to the movement in favor of the use of silver from the desire of the silver mining states and their representatives, that the price of the metal should be kept up through a larger use of it for coinage. But this element, while sometimes prominent in the agitation, was not then, as it has not been in more recent years, of any great importance by itself. The real strength of the agitation for the wider use of silver as money comes from the conviction of large masses of the people that the community has not enough money: a conviction which may be fostered by the selfish interests of mine-owners, and doubtless has often been based on arguments ludicrously fallacious, but which rests, nevertheless, on a foundation not entirely selfish, and has some support from economic reasoning that deserves candid and attentive discussion.

Although the specific measure passed in 1878 thus rested on a long train of historical causes, it contained details that were essentially new, not only in our own experience, but in that of the world at large. It provided for the injection into the currency of a large annual increment of over-valued coin. It did not establish bimetallism proper; for the coinage of silver was not free, but was undertaken by the government on its own account, the Treasury reaping the profit which would accrue so long as the coins were kept at a higher value than

that of the bullion put into them. It did not establish anything like a subsidiary coinage; for the new coins were legal tender to an unlimited amount, and no attempt was made to adjust their quantity to the needs of the community for the convenience of small change. It simply provided for a regular mechanical addition of large amount to the general circulating medium. No precise experiment of this kind had ever before been tried. It is true that Germany and the countries of the Latin Union possess, in their circulating medium, large quantities of over-valued thalers and five-franc pieces which are exactly like our silver dollars. They also are legal tender without limit; their total quantity is limited; and it is only by this limitation of the quantity that their value is kept above that of the bullion contained in them. But the thalers and francs in these countries are not new additions to the currency. They are remnants from an earlier period, when Germany had a silver standard, and the Latin Union a complete bimetallic standard. No addition whatever to the thalers is made in Germany; and if some coinage of five-franc pieces takes place in France and in other countries of the Latin Union, the additions are meant merely to fill the place of abraded coins, to provide for the ordinary losses from daily use, and to make any additions to the supply which may be needed for convenience in making small change. No other country has ever entered on an addition of over-valued coin to its circulating medium having the object and extent of that made by our silver act of 1878. This characteristic of the measure, it need hardly be said, was the result not of any deliberate intention to try a new experiment, but of the spirit

of compromise which explains so many anomalies in the legislation of democratic communities. The silver act, as passed by the House of Representatives, provided for complete bimetallism,—for the free and unlimited coinage of the silver dollar at the old ratio of 16 to 1. In the Senate, it was amended by the substitution of the provisions for a limited coinage, which were finally enacted. The compromise was meant to satisfy both those who objected to the cheaper standard and those who wanted more money; and it afforded a welcome escape to the legislators who were trying to satisfy all parties. At the time, no one probably expected that the measure would remain in force for any great length of time. The conservative element hoped that it would be repealed after a short trial; the inflationists (for by that name they might, then at least, fairly be called) believed that it would soon be superseded by the free and unlimited coinage of silver. As it happened, the act remained in force, unamended, and indeed without very serious attempt at amendment, for over twelve years; and the measure which succeeded it in 1890, though different in many details, followed the same method of forcing a large regular injection into the circulating medium of money based on silver purchases by the government.

On the general principles which are expounded in standard books on political economy, the effects of this novel experiment were not difficult to predict. Each new dose of silver money would push out,—after the resumption of specie payments had taken place,—an equivalent amount of gold. This process would continue until all the gold in circulation had disappeared. So long as any gold money was left in

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the country, gold and silver would circulate side by side, and the silver dollars would be equal in value to the gold dollars. After the gold had disappeared, silver alone would be the basis of the monetary system. Prices would accommodate themselves to the new measure of value, and would become somewhat higher than they had been under the gold standard. If thereafter the government still continued to coin and issue the annual increment of silver, the effect would be simply a corresponding outflow of silver from the country.

Something of this sort was probably expected at the time by most persons familiar with economic reasoning; and such doubtless would have been the working of the measure if no complicating forces had intervened, and if the effects of an increased issue of money had proved to work themselves out with that mechanical simplicity which is assumed in the usual statements of the theory of money and of prices. But neither of these conditions has been fulfilled. Complicating forces have, in fact, intervened. There have been changes in other parts of the circulating medium, and great changes in the general economic conditions of the community, which must necessarily have modified to a great extent the expected effects, even if the second assumption, of mechanical simplicity in operation, had held good. But this second assumption also has proved to need important correction. Our experience under the act of 1878 has shown that, in this class of economic phenomena as in others, the working of the economic forces is far from simple. The clear-cut fundamental doctrines, while they remain true at bottom, and while they are confirmed by experience

in the long run, need correction and qualification such as experience alone can supply. For this reason, the actual working of the act of 1878 is of interest not only as a matter of present political interest, but as a lesson of permanent instruction for the economist. The sort of corrections of accepted doctrines which are supplied by our experience will be explained in detail in due time; but it may not be amiss to state at the outset that the modifications by no means destroy the validity of the accepted conclusions. They rather supplement them, and show with what variations they apply under new conditions. The general theory of money, as worked out by Ricardo, and expounded on his lines by every writer of note since his time, remains intact; but something is added to it, and, more particularly, the need of care and discretion in making predictions based on it, is illustrated to perfection.

II.—The Silver Circulation.

So much by way of preface. Turning now to the actual working of the act of 1878, the first fact to be noted is the attitude of the banks to the silver currency, which has been and is a factor of prime importance. From the outset, the banks, especially in the large cities of the East, have fought shy of the silver money. They have been unwilling to use large quantities of it, and still more unwilling to allow large quantities to accumulate on their hands. This disposition no doubt may be ascribed in part to their close connection with the creditor class, to whom a lowering of the standard of value must be objectionable. But in good part it is due to causes of a

different sort. The desire for a steady and unvarying basis for credit transactions results naturally from the conditions of the banker's business; and all transactions connected with foreign trade must of necessity rest on a gold basis. Not least important is the simple public-spirited preference for gold as the better standard of value in the interests of the community at large—a preference, to be sure, which rests on tradition quite as much as on a clear weighing of the merits of the case. At all events, in November, 1878, shortly after the passage of the silver act, and immediately before the resumption of specie payments, the banks of the New York clearing house adopted a rule prohibiting "the payment of balances [*i. e.*, between banks at the clearing house] in silver certificates or silver dollars, except as subsidiary coin in small sums (say under ten dollars)."[1] In 1882, Congress tried to break up the practice so established by inserting in an act of that year, for extending the corporate existence of national banks, a proviso that no national bank should be a member of a clearing house at which silver certificates were not receivable in payment of balances. The rule of November, 1878, was therefore dropped by the New York banks. But their

[1] These rules are printed in the Comptroller's report, in *Report on the Finances* for 1878, p. 169. It is there stated that the Boston banks adopted the same rules; but the practice of the Boston banks did not become settled until after the events of 1885, to which reference is made below, at p. 31.

The usage of the banks in the West varies from that of the Eastern banks. Philadelphia follows the example of New York and Boston in the refusal to use silver currency. But in Chicago, St. Louis, Kansas City and Denver, silver certificates, and bank notes as well, pass between banks as freely as any form of currency, though in fact no large amounts are used.

practice remained unaltered. Congress can compel a national bank to receive silver certificates, but cannot compel it to offer them. The banks have by tacit consent refused to make the tender. In fact, the silver currency has not been allowed to enter into transactions between banks.

The banks did not "boycott" the silver currency, as it has sometimes been put. They received it on deposit, and accepted it in tender of debts when offered. But they endeavored to hold as little of it as possible. They paid it out, first from the cash flowing through their hands, and still so pay it out. If the silver dollars or certificates which accumulate on their hands were not carried off by the calls for cash from persons presenting checks, the excess was got rid of in another way. Both silver dollars and certificates are receivable for all public dues, customs included; and when they began to accumulate in the banks, they were turned over to the Treasury, chiefly through the hands of importers and custom house brokers who have payments to make for customs dues. The signal importance of this attitude of the banks will soon appear.

The history of the working of the silver currency is most easily followed on the chart appended to this paper, which is continued as nearly as may be to the present time, and therefore bears on the act of 1890 as well as on that of 1878. The part of the chart to which the reader's attention is chiefly called is the irregular dotted line, which begins at the bottom on the left hand, and ascends irregularly and steadily athwart the page. It indicates the amount of silver currency (dollars and certificates added together) actually in circulation from month to month. Above

2

it runs an unbroken line, almost straight, which soars up the page without a break, and indicates the total coinage under the act of 1878. After July, 1890, this straight line stands for the issues under the act of 1890, which will be described in its place in the pages to follow. It will be noticed that the rate of increase is markedly greater in 1890, in consequence of the legislation of that year; and also that the increase is more irregular, a change due to the rapid fluctuations in the price of silver in the latter part of 1890. Still another important line is the broken one which runs across these two, and represents the net amount of gold held by the United States Treasury. The fluctuations which it indicates are marked, and some of them,—especially for 1884–85 and 1890–91,—are of much significance. Of least importance, though of interest as a matter of curiosity, is the lowest line, of asterisks, which represents the amount of actual silver dollars in the hands of the public.

Certain preliminary points suggested by this chart may be disposed of, before proceeding to the more important general features which it indicates. Looking at the line which represents the amount of silver currency in actual circulation, we observe a very distinct increase in the outgo or circulation of silver in the latter half of each year. That increase shows itself regularly, even in years like 1885, when the general movement was strongly toward a reduction in the volume outstanding. In the first half of each year, on the other hand, there is either a decline or a distinct retardation of the rate of increase. These regular fluctuations are clearly due to what is called "moving the crops,"—the flow of currency to the

West and South, to effect of exchanges which accumulate at the time when the staple agricultural products pass from the hands of the farmers and planters. The steadiness of this particular phenomenon, maintaining itself throughout the irregularities of the general movement, points to a conclusion of which ample confirmation will be found in other directions: that the outgo of silver money into circulation has by no means proceeded with that regularity which the legislature expected and intended, but has been very greatly affected by circumstances beyond legislative control.

Another point, of some interest though of no great importance, is the circulation of the actual coined dollars, which is represented by the lowest line of the chart. In one respect, their circulation follows those fluctuations which have just been noted in the silver currency as a whole. The volume almost invariably increases at the close of each year, and as regularly decreases at the beginning of the year. Apart from these periodic changes, there is a general slow increase until 1886, and thereafter the amount outstanding remains practically stationary. There seems to be room for about sixty millions of the dollars, and for no more.

The government has made every effort to get the dollar coins out of its hands. Congress has annually appropriated a sum to enable the Treasury Department to ship them, free of expense, to all applicants in any part of the United States. The premium so offered to persons who have occasion to use money in small denominations, and especially to employers having large pay-rolls, has sometimes led to considerable call for them. But the great bulk of the coins

thus got out of the Treasury return to it almost at once. The employees to whom they are paid, get rid of them as fast as they make purchases; the shopkeepers, in whose tills they accumulate, finding their customers averse to taking them in change, turn them into the banks on deposit; and the banks finally turn them into the nearest sub-Treasury in payment of public dues. The round-trip from Treasury back to Treasury is easily made, in some districts, in the course of a single week.[1] The degree of favor which they meet with of course affects this movement, and varies in different parts of the country, apparently reflecting in a curious way the popular feeling as to the desirability of having silver currency at all. They circulate very little east of the Alleghanies, but are used more freely and permanently in the Mississippi valley. Among the negroes of the South the big pieces are said to be favorites, and to find a permanent lodgment. Their greatest circulation, as we have seen, was reached in 1886; after that time the change in the denominations of silver certificates, to be discussed later, caused a decline in the amount used.

We may now return to the movements of the silver currency as a whole, indicated by the irregular unbroken line of the chart. Between that line and the dotted regular line above it, indicating the maximum issue authorized, there is a gap representing

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[1] The practice of paying express charges on shipments of silver dollars has ceased to be of importance since 1886, when the issue of silver certificates in small denominations was authorized. Since that date, as will presently be explained, there has been little difficulty in getting the silver currency into circulation, and no occasion at all for stimulating the circulation of dollars rather than of certificates.

what we may call the dead silver. The gap stands for the dollars coined (or, after 1890, for the ounces of silver purchased), which lie in the Treasury, but are not injected in any form into the circulating medium. As a glance at the chart shows, it is very variable. It was greatest in 1885 and 1886, the maximum being reached in July of the latter year, when the dead silver was no less than ninety-four million of dollars. It was least in 1881, and again in the last few months of 1889. The variations show the greater or less success with which the silver currency made its way into the working money of the country. By them we may divide its history into four periods. The first runs from 1878 to 1884, a period on the whole of ready circulation. Then comes a break, in 1885 and 1886, when the silver currency contracted, and the dead silver accumulated in the Treasury,—much the most interesting and instructive of the three stages. The third period begins in 1886, when the volume in circulation expands, and gains rapidly on the total coinage, causing a steady decline in the amount of dead silver. Finally, with the act of July, 1890, the whole silver question enters on a new phase, which can best be discussed by itself. These four periods I shall take up in succession.

III.—1878-1884.

The first silver dollars were coined in March, 1878, and in the course of that month 190,000 of them went into circulation, while 810,000 remained in the Treasury. Something like this proportion was maintained through 1878 and the first half of 1879: not

more than one-fifth of the coins made their way into the hands of the public. Silver certificates practically did not make their way into circulation at all.

The history of the certificates at this time is curious and significant. When the first purchases of bullion were made, in the course of 1878, checks in payment were drawn by the Director of the Mint, payable in silver dollars. The purchases were made chiefly at San Francisco. There the payees drew, instead of silver dollars, silver certificates of large denominations. These were sent at once to New York; and within ten days from the day of issue they found their way into the Treasury through the New York custom-house. Had the revenues collected by the government in San Francisco been larger, they would probably have been turned in at that port within forty-eight hours.[1] The rapidity with which they came back at first nonplussed the officers of the Treasury. It was some time before they learned how impossible it was to get the certificates of large denominations into circulation: a result, however, which followed inevitably from the unwillingness of the banks, who alone can conveniently use the large certificates, to hold them or use them. It was certain from the start that the only form in which the silver currency could get into permanent circulation was in the denominations which serve for every day retail transactions. In the first year no special effort seems to have been made by the Treasury to get out the certificates of the smaller denominations permitted by law. Conse-

[1]See the Report of the Treasurer in the *Finance Report* for 1879, p. 350. Up to June, 1879, there had been issued $7,843,000 of certificates of denominations of $1,000, of which $6,683,000 had been redeemed.

quently the dead silver accumulated rapidly. At the end of June, 1879, out of a total coinage of thirty-six millions, the Treasury held in its vaults, unrepresented by certificates in circulation, no less than twenty-eight millions. These twenty-eight millions represented so much revenue paid out by the government for the purchase of silver which was simply stored away in its vaults. As the revenue then greatly exceeded the expenditure, the process caused no financial embarrassment; but clearly it was one which could not go on indefinitely.

This phase, however, did not last long, nor was it characteristic of the general movement during the first of the three periods. About the middle of 1879 a slight upward movement began, both in the circulation of dollars and of certificates. Towards the end of 1880, as the chart indicates, this movement attained large dimensions. The amount of silver certificates in circulation increased with a bound, rising from less than eight millions in August to more than thirty-six millions in December, and leaving only a narrow margin of dead silver in the Treasury. In the first half of 1881 there was a check to the increase; but in the second half of that year the upward movement was resumed. By the end of December, 1881, the silver certificates in the hands of the public amounted to over sixty-two millions, and the circulation of dollars and certificates combined was within seven millions of the total amount coined.

Some explanation of this sudden and extraordinary change is to be found in a new measure adopted by the Treasury Department for the purpose of pushing the silver into circulation. In September, 1880, the

Treasury issued a circular by which, in exchange for deposits of gold coin with the assistant treasurer in New York, drafts were offered on the sub-treasuries in the South and West, payable in silver certificates. In other words, the Treasury undertook to save the expense of the transportation of cash to all persons who had occasion to remit to the South and West. The bait took: large amounts of certificates were paid out, in exchange for deposits in New York, by sub-treasuries at New Orleans, St. Louis, Chicago, and Cincinnati.[1] The payments, as we might expect, were almost entirely in certificates of the two smallest denominations then allowed by law,—for ten and twenty dollars.[2]

[1] See the *Report of the Treasurer* for 1881, in the *Report on the Finances*, p. 430. Between October 15, 1882, and March 2, 1883, this practice was suspended, and it was finally discontinued in Jannary, 1885. By far the largest part of the silver certificates issued under it were paid out by the sub-treasuries of St. Louis and New Orleans,—a clear indication of the region from which the demand for money came.

[2] The denominations of the silver certificates outstanding at the close of the fiscal year 1882 are given below. I have added figures for 1886, by way of illustrating the form in which the silver currency went into circulation at the period here under consideration.

Silver Certificates.	1882	1886
One dollar	....	....
Two dollars	....	....
Five dollars	....	....
Ten dollars	29.2	50.3
Twenty dollars	25.0	45.0
Fifty dollars	3.3	7.4
One hundred dollars	4.0	9.6
Five hundred dollars	1.7	1.8
One thousand dollars	2.9	1.9

It must be remembered that "outstanding" here means issued by the Treasury, and includes certificates held by the Treasury against itself; and the chances are that, even of the small amounts of large certificates, a good part was held by the Treasury in its cash. Compare the footnote to p. 45, below.

It is obvious that a device such as the Treasury resorted to in 1880 would have had no effect on the movement of the silver currency out of the public vaults, if the demand for cash to be shipped westward had not caused exchange in New York on the West to be at a premium. The conditions of the time led to such a demand, and it was inevitable that there should be in some form or other a westward movement of cash. Had there been no silver currency, there would certainly have been an inflow of gold from abroad even greater than in fact took place. It is not necessary to do more than recall to the reader's mind the salient events of these unusual years, which concurred so luckily to assure the success of the resumption of specie payments, and to make possible the absorption of the silver currency. The crops of 1878 to 1882 were abundant, even after making allowance for the comparatively lean year 1881; the crops in Europe were meagre; our exports suddenly swelled, and attained in 1881 a volume which has not again been reached up to the present time (1891). Large quantities of gold flowed in during the fiscal years 1880 and 1881. The long period of depression which began with the crisis of 1873 was likely to have been followed in any case by a renewal of activity; the sudden turn in foreign trade contributed not a little to stimulate the general revival. In all directions new operations were begun, and old ones pushed on a larger scale. The building of railroads and the production of iron, both supposed to be barometers of trade, advanced with extraordinary steps. Most significant of all, bank loans and deposits swelled rapidly; the reserve of

lawful money after 1880 remained nearly stationary;[1] the national bank circulation rose, and reached its highest point in the latter part of 1882.

All this activity meant a greater use of money in paying wages, in the retail transactions of every-day life, in "moving the crops." The rapid growth of population, especially in the West and South, would have in any case brought about a greater demand for what we may call large change. The conditions under which national bank notes could be issued were already becoming so unpromising that no considerable increase in their quantity could take place; and the silver currency consequently found a ready and permanent circulation. The Treasurer of the United States, in his report for 1881, thought himself justified in saying that their issue "averted what might have proved to be a serious public incon-

[1] For convenient reference, some significant figures as to bank operations are here given for the whole period from 1878 to 1889. The figures (except for the last column) indicate millions:

	Total deposits in all national banks.	Total specie and lawful money held.	Reserve held by banks of New York.	Proportion of reserve to deposits in New York.
Oct. 1, 1878..........	679	127.7	50.9	26.8%
1879..........	769	138.1	53.1	25.3
1880..........	968	172.5	70.6	26.4
1881..........	1,112	172.6	62.5	23.3
1882..........	1,119	174.8	64.4	25.4
1883..........	1,168	188.4	70.8	26.5
1884..........	1,099	219.8	90.8	35.6
1885..........	1,248	263.5	115.7	37.0
1886..........	1,301	225.1	77.0	27.2
1887..........	1,388	245.0	80.1	28.2
1888..........	1,543	268.2	96.4	28.2
1889..........	1,655	263.0	84.9	25.1

The reader will note the rise in deposits, and the stationary reserve, in 1880-84. The slackening of the growth of deposits in 1884-85 and the marked accumulation of cash at that time will be considered later, when we come to the second phase of the silver situation.

venience." No doubt the absence of any increase in the currency would have been an inconvenience. But if there had been no silver, other sorts of money would not have failed to supply the need. As it was, the issue of bank notes increased under the influence of the same causes that led to the greater use of silver; a large importation of gold took place. In one or both of these forms, the money supply would have adapted itself to the demand. In the absence of silver, an even greater importation of gold would have taken place, and the every-day circulating medium would have been made up in larger proportion of that metal.

These general conditions were little changed through the years 1882 and 1883. There was no such decided swing in business operations as there had been in the two years preceding; but some advance continued. The volume of bank loans and deposits, as shown by the Comptroller's reports on the national banks, steadily increased, though at a slackening rate, until the close of 1883. While the conditions thus continued favorable for an increase in the amount of money in active circulation, the decline in the circulation of national bank notes, which began after the maximum had been reached in the early part of 1882, contributed still more to make way for a growth in the volume of silver used by the community. Accordingly, while there was some check in 1882 to the upward movement of outstanding silver, that movement was resumed in 1883; and on the whole, for the three years 1881, 1882, and 1883, the silver currency was absorbed by the public as fast as the dollars were coined at the mint.

IV.—1885–1886.

But the signs of a general reaction, such as all experience would lead us to regard as inevitable, showed themselves with the beginning of 1884. The extraordinary failures of the Marine National Bank and of the firm of Grant & Ward took place in May, 1884, and were followed by other bank suspensions, by the failures of various private bankers and brokers, and the break-down of large railway enterprises, notably of the West Shore Railroad. While there was no acute crisis like that of 1873, all the signs of a period of depression showed themselves. The building of railroads almost ceased; the production of iron fell off; bank loans and deposits declined. With this general break-down, the circulation of the silver currency entered on its second phase.

As the chart indicates, the beginning of 1884 showed some decline in the amount of silver dollars and certificates held by the public. This was followed in the autumn months by the usual increase; but in the early part of 1885 there was a sharp decline. No appreciable growth took place in the autumn months of 1885, at the time when a growth was most likely to take place; and the little that was gained was lost again in the first half of 1886. On the whole, the silver currency in the hands of the public remained stationary from the beginning of 1884 till the middle of 1886. Under these conditions the regular coinage of silver dollars necessarily caused dead silver to accumulate in the Treasury; and in July of 1886 the dead silver reached its maximum, nearly ninety-four millions of dollars.

The explanation of the stationary volume of the silver currency is not difficult to find. With the general standstill or decline in business activity, the occasions for the use of money for transfer from hand to hand ceased to grow, even became less. The bank deposits, and the clearings of the banks in the cities, shrank appreciably, indicating a decline in wholesale transactions. The currency of retail and consumer's transactions, in which the silver had hitherto found room for expansion, showed a similar tendency. As is usual in periods of depression, the unused money of the public accumulated in the vaults of the banks, and what is called a plethora of money continued through the year 1885.

The general conditions which caused cash to accumulate in the reserves of the banks, caused the silver certificates to accumulate in the vaults of the government. The silver certificates in general now went through the same course which we have seen in the circulation of the silver dollars and of the certificates of large denominations. The people had less occasion for using money than before; they certainly had no occasion to use the additional silver currency which the regular monthly coinage was creating; the banks would not let the silver accumulate on their hands; consequently it found its way back into the government vaults. The figures as to the customs receipts of the government at New York show exactly when and how this back-flow

took place.[1] During 1882 and 1883 gold and gold certificates had formed between 70 and 80 per cent. of the customs receipts at New York,—the largest single point of collection for the public revenue. Beginning with 1884, the proportion sank, and for the fiscal year 1884–85 it was less than 35 per cent. Silver, in the form of dollars and certificates, accumulated in the Treasury, while from the beginning of 1885 till the middle of 1886 the silver currency in the hands of the public declined.

The situation of the Treasury under these circumstances was, if not dangerous, at least suggestive of the danger of a breakdown in the policy which the government has succeeded in pursuing ever since the resumption of specie payments,—that of paying gold to every creditor who chooses to demand it. The amount of gold in the government's revenue was shrinking; and moreover, with the depression in trade, customs receipts diminished, and the total revenue was also falling off. On the other hand, the ordinary gold liabilities and payments showed little decline, if any. The chief point of disbursement of the government is through the sub-Treasury in New York, which is a member of the New York clearing-

[1]The receipts from customs at New York were made up as follows:

	Gold coin and certificates.	Silver coin and certificates.	United States notes.
First six months of 1883	75.8%	17.8%	6.4%
Second " " " 1883	77.5	16.8	5.7
First " " " 1884	59.8	27.9	12.3
Second " " " 1884	34.7	34.9	30.4
First " " " 1885	36.0	36.6	27.4
Second " " " 1885	55.3	14.6	30.1
First " " " 1886	28.2	12.5	59.3
Second " " " 1886	47.3	11.6	41.1

house, and has regularly larger amounts to pay than to receive. The banks, who are its creditors at the clearing-house, prefer gold. The result, from the beginning of 1884, when silver began to crowd gold out of the public receipts, was a heavy drain on the government's reserve of gold. If the reader will turn to the chart, and observe the line representing the government's gold holdings, he will see that the amount fell from over one hundred and fifty millions in the beginning of 1884 to less than one hundred and sixteen millions at the close of May, 1885. At the latter date the reserve was the smallest held at any time since the resumption of specie payments.

The policy of the Treasury during this period was simple, though not always easy to maintain. After the death of Secretary Folger in September, 1884, Mr. Gresham was put in charge of the Treasury, but was succeeded in a month by Mr. McCulloch, who remained in office till March of the following year, when the new administration brought Mr. Manning into the office. Both Mr. McCulloch and Mr. Manning refrained from pushing silver certificates into circulation where they were not wanted; paid out silver currency whenever it was likely to stay out; ceased to pay out funds for the redemption of bonds; and endeavored to strengthen the reserve of gold. As to the silver certificates, the policy of the Treasury is shown by the events in Boston during the early part of the summer of 1885. At the sub-Treasury at Boston, silver certificates had been paid out less sparingly than at New York. Silver currency consequently became so plentiful that hardly any other form of money was to be had. A turn in the balance of payments between New York and

Boston brought occasion for remitting cash to New York. For such remittances, the tacit understanding of the banks made silver unavailable. Consequently exchange on New York came into demand, and went up to a premium of a dollar a thousand. The express charge for carrying cash to New York is only fifty cents a thousand; but cash available for New York payments, — namely, gold or greenbacks, — was scarce; hence the unusual premium on New York exchange. The Boston banks thereupon appealed to the Secretary of the Treasury to cease paying out silver certificates at the Boston sub-Treasury. Their request was granted; and a repetition of this sort of embarrassment was thereby prevented.[1]

On the other hand, the Treasury made an effort to check the return of silver currency into its vaults by getting more silver dollars into permanent circulation. At this time the currency of the denomination of one and two dollars consisted almost exclusively of United States notes, or greenbacks.[2] In June, 1885, the issue of greenbacks in denominations of less than five dollars was stopped, in the hope of bringing about a greater use of the coined dollar. The effects of this measure could only be gradual. The one dollar and two dollar notes already in circulation could return to the Treasury only as, becoming dirty and unfit for use, they were sent in to be ex-

[1] It was at this time that the Boston banks adopted definitely the New York practice of not using silver certificates in payment of clearing-house balances. See the note to p. 16, above. The revenue payments to the sub-treasury at Boston were comparatively small, and the Boston banks accordingly had not so ready a means of getting rid of their silver certificates as those of New York.

[2] Bank notes of less than five dollars had not been issued since 1879, the resumption act having prohibited their issue after that date.

changed for clean notes. The old notes could then be destroyed, and new notes of larger denominations furnished in their place. As it turned out, the public had a strong preference for notes rather than coin, and when it appeared that new notes of small denominations were no longer to be supplied, the old ones were kept in use long after they had become unfit for circulation. Dirty notes were preferred to bulky dollars. Consequently, the success of this measure was not great. Nevertheless, something was secured; for in the second half of 1885, when the general conditions were unfavorable to an increase in the outstanding circulation, and when the silver certificates in the hands of the public in fact showed a decline, the amount of silver dollars outstanding showed an increase of ten millions. The gain was made chiefly in the South, and, so far as it went, helped in preventing the Treasury from being overwhelmed by the accumulation of silver.

Much more important as a means of tiding over the period of depression was the cessation of the payment of the public debt. In 1885 there were still outstanding about two hundred millions of 3 per cent. bonds, issued in 1882 in place of older bonds bearing a higher rate of interest, and redeemable at par at the pleasure ot the government. The process of calling them in, and reducing the public debt by their payment, had begun immediately after their issue, and had gone on steadily until late in 1884. Then it ceased, although the government revenue still continued to exceed its expenses. From September, 1884, until December, 1885, a period of more than a year, no bonds were called, and the interest-

bearing public debt remained stationary.[1] In other words, the surplus revenue of the government, instead of finding its usual vent in the redemption of bonds, was devoted to increasing the dead silver in the Treasury vault. Every month two millions were spent in buying silver bullion and coining it into dollars, which were stowed away in the Treasury vaults out of harm's way. In addition, large quantities of silver certificates were received in payment of public dues, and then allowed to lie idle in the Treasury. In August, 1885, there were nearly forty-three millions of silver certificates in the Treasury, the largest holding since the passage of the act of 1878. The result of this cautious policy was to retire the redundant silver certificates: as this was accomplished, less of them were turned in to the Treasury in payment of public dues; more gold flowed in, and the government's gold reserve rose.

It is obvious that the Treasury could pursue with success the course just described only because its income exceeded its expenditure. In the eighteen months between the beginning of 1885 and the middle of 1886, the government received over twenty-six millions in silver certificates which it did not reissue; paid out, in addition, some thirty-six millions for silver bullion, which was coined into silver dollars, and in that form stowed away in the

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[1]This does not appear in the annual reports of the Secretary of the Treasury, which run for the fiscal year ending June 30. Bonds were called in the first half of the fiscal year 1884–85, and in the second half of 1885–86, so that the report for each year states a decline in the bonded debt. But the 131st call for bonds matured on November 1, 1884; the 132d, on February 1, 1886. Between those dates the 3 per cents. outstanding remained stationary, at 194.2 millions.

Treasury vaults; and materially increased its net holdings of gold. These enormous sums of course represent an excess of income over outgo. Notwithstanding the decline in its receipts as compared with earlier years, the government still had a surplus so large as to enable it to hoard sixty millions of silver currency, and to add twenty-five millions to its holdings of gold, before it resumed, in the beginning of 1886, the repayment of the public debt. In the financial history of any other country such a surplus would be considered a rare piece of good luck. We have had it for so many years that we do not fairly realize what risks it enables us to run without coming to grief.

Further aid in 1885 came from the willingness of the New York banks to support the Treasury. In July of 1885, when the gold reserve was at its lowest, the banks of New York, through the clearing-house, turned over to the Treasury $5,915,000 of gold, in exchange for fractional silver.[1] The transaction was called an "exchange": it was to all intents and purposes a loan. The banks moreover expressed their willingness to lend more, if more should be needed. The avowed object was to enable the Treasury to maintain gold payments until the meeting of Congress in December, when legislation for stopping the silver issues seems to have been expected.

[1]The correspondence relating to this transaction is printed in the report made by Secretary Manning in March, 1886, in answer to an inquiry from the House of Representatives. *House Executive Documents, 49th Congress, 1st session* (1885–86), *vol.* 30, *No.* 100. At the end of October, 1885, when the Treasury gold had risen to $142,000,000, the banks asked for a return of part of their gold, and were told bv Acting-Secretary Fairchild they could have the whole of it.

It is an open question whether at that juncture the situation was such as to make necessary this call on the banks for aid. There was certainly a strong feeling of doubt as to the Treasury's ability to maintain its policy of paying gold to any creditor who wanted it. That feeling showed itself in the pages of leading financial journals, like the *Financial Chronicle,* which steadily represented the situation to be full of danger; and it was reflected in the concluding chapter of Professor Laughlin's *History of Bimetallism,* published in the course of 1885. It was shown in a more practical form by the striking increase in the holdings of gold by the banks, and by their disposition to turn into the Treasury not only silver, but greenbacks as well. The gold held by the banks of New York, for example, rose from about seventy-two millions in the early part of 1884 to one hundred and thirteen millions in the middle of 1885.[1] On the other hand, the greenbacks, which, like

[1]The reports of the Comptroller of the Currency state the holdings of specie (which is practically all gold) and of legal tenders by all the national banks, at the dates stated below; to which I have added, from the weekly statements in the *Financial Chronicle,* the holdings by the New York banks at the same dates:

	All national banks.		Banks of New York.	
	Specie.	Legal tenders.	Specie.	Legal tenders.
1884 March 7........	122.1	75.8	71.9	29.7
April 24........	114.7	77.7	58.2	28.1
June 20........	109.7	76.9	51.3	28.8
Sept. 30........	128.6	77.0	73.8	30.4
Dec. 20........	139.7	76.4	86.8	37.7
1885 March 10......	167.1	71.0	103.8	32.0
May 6..........	177 4	77.3	113.0	32.7
July 1..........	177 6	79.7	113.9	43.6
Oct. 1..........	174.9	69.7	107.1	30.7
Dec. 24....	165.4	67.6	91.0	27.2
1886 March 1........	171.6	67.0	89.7	31.7
June 3..........	157.5	79.6	66.5	40.0
Aug. 27.........	149.0	64.0	68.6	25.7

other forms of money, flowed into their tills in the course of the depression, were turned over to the government in payment of public dues. As the figures given a few moments ago show, the government was getting thirty, forty, fifty per cent. of its customs receipts at New York in the form of greenbacks.[1] Such an inflow of greenbacks was an unmistakable sign that general confidence in the ability of the Treasury to maintain gold payments was shaken. Gold in hand was preferred to the greenback, the government's promise to pay gold.

A word may be said here as to the position of the United States notes, or greenbacks. The amount of these obligations outstanding was fixed by the act of May, 1878, at the point where they then stood,—$346,681,016. The resumption of specie payments in 1879 made them redeemable in coin; "coin" being then undoubtedly supposed to mean gold. The Treasury has ever since held itself willing to redeem in gold any notes presented; but Congress has never made any specific provision as to the amount of gold to be reserved for that purpose. The Resumption Act itself, passed in 1875, simply directed the Secretary of the Treasury to redeem the notes after January 1, 1879, and authorized him to accumulate gold for that purpose by selling bonds; but how much gold he was to accumulate or to keep on hand, was left to his discretion. The only approach to the statement of a specific reserve is to be found in an act of 1882, in which a section authorizing the issue of gold certificates is qualified by the proviso "that the Secretary of the Treasury shall suspend the issue of such gold certificates whenever

[1] See the note to p. 30, above.

the amount of gold coin and bullion in the Treasury reserved for the redemption of United States notes falls below one hundred millions of dollars."[1]

This proviso has been construed by some Secretaries of the Treasury with greater strictness, by others with less; but all Treasury statements since its enactment have set aside, in some form, one hundred millions of gold as a separate fund among the assets. On the face of it, the only legal duty imposed on the Secretary of the Treasury seems to be that of suspending the issue of gold certificates when the gold in the Treasury is less than one hundred millions. It can hardly be maintained that, when his gold reaches the hundred million line, he must refuse to pay it out for any purpose except the redemption of United States notes. But practically it is immaterial what precise legal interpretation is given to the section in regard to the gold reserve. Even in 1882, the greenbacks did not stand alone, as they doubtless were supposed to do; since for all practical purposes, the silver certificates constituted an obligation bearing on the gold reserve as much as did the greenbacks. Certainly at present, when the act of 1890, as we shall presently see, has added a new and large mass of notes constituting a direct liability against the government's gold, it is quite out of the question for the Treasury to adopt any policy which treats the greenbacks as a distinct and

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[1]The act was one for extending the corporate existence of national banks: the section here referred to had nothing to do with its main provisions. See Dunbar's *Laws Relating to Currency, Finance, and Banking*, p. 223.

As to the history and meaning of the proviso as to the hundred millions, see Horace White, "The Silver Situation," in the *Quarterly Journal of Economics*, July, 1890, vol. IV, p. 397.

peculiar claim on its holdings. The currency which the government now issues includes not only the greenbacks, but also the silver certificates, the silver dollars, and since 1890 the new Treasury notes. All of these it tries to keep equal with gold: the greenbacks and the new notes by the direct offer of immediate redemption in gold; the silver dollars and silver certificates by its willingness to accept them in all payments to itself, coupled with the offer to make all payments to its creditors in gold. The money which rests on the government gold reserve therefore now includes much more than the greenbacks. If one hundred millions was thought no inadequate reserve for the greenbacks alone, certainly no less sum will suffice for the larger mass. Hence any approach to a hundred millions in the Treasury holdings of gold must be a source of anxiety to a conservative Secretary; and the tradition of a required reserve for the greenbacks, whether or no it has a clear legal basis, makes that limit important in the eyes of the public as well as of the government officers.

The low level reached by the gold reserve in the middle of 1885 was, therefore, a natural source of the uneasiness which, as we have seen, the Treasury and the public then showed. On the other hand, there were elements of strength in the situation in 1885. By far the most important of them was the surplus of revenue over expenditure, which, as we have seen, was used as a means of preventing the silver currency from being put in circulation in excessive quantities. Some revival of business activity set in during the second half of 1885, helping the Treasury in both directions. It caused an

increase in the receipts from customs duties and other sources; it also caused an increased use of silver currency in the reviving business of the people. The decline in the volume of the silver currency outstanding came to an end in the autumn of 1885, while the gold reserve showed a considerable upward movement. The period of real anxiety lasted only a few months, in the spring and summer of 1885. By the end of that year the situation could no longer cause anxiety.

V.—1886-1890.

The third of the periods into which we have divided the historical account begins with the year 1886. If the reader will turn once again to the chart, he will observe, in the middle of 1886, a sharp upward movement in the line showing the volume of silver in use with the public. The turn marks the beginning of a new stage. The situation at this period was modified by two factors of importance: first, the sharp decline in the national bank circulation, and, second, the issue of silver certificates of very small denominations.

The decline in the national bank note circulation presents a set of questions different from those discussed in the present paper. A very brief statement of its causes and extent will suffice to make clear its bearing on the present subject. The steady improvement in the credit of the United States, causing its bonds to yield a lower and lower rate of interest, tended to cut down more and more the profit on the issue of national bank notes, until by 1883 that profit had practically disappeared. After the revival of

activity in 1880, the amount of bank notes in circulation increased, with little interruption, until the close of 1882, when it reached its maximum. Then a decline set in, which has continued without interruption to the present time, and is likely to continue, though at a slackened rate, for several years to come, until the minimum permitted by law is reached. The immediate cause was the steady redemption by the government of the 3 per cent. bonds of 1882, of which the banks held largely. Other bonds in the market,—the 4 and 4½ per cents., and the Pacific railway 6s,—were at too high a premium to make it profitable to buy them as a basis for circulation. During the years 1884 and 1885, when, as we have seen, the process of debt payment ceased for a while, the decline of the bank circulation naturally slackened; but when the improvement in the government financial condition made it possible to resume the redemption of bonds, the decline again set in sharply, and caused a rapid contraction of the bank notes.

A word may be said as to the exact mode in which the contraction of the note issue has been brought about. The provisions of the national banking acts permit a bank which wishes to retire its circulation, to deposit in the Treasury lawful money to the amount of its notes outstanding, and thereupon to receive the bonds held as security for the notes. The liability of the bank for the notes thereupon ceases, the government assuming the obligation to pay them. The notes, however, may remain in general circulation for some time after the bank has done with them, and, in fact, are likely to come in for redemption only so fast as dirt and wear

render them unfit for use. The Treasury, meanwhile, does not hold the lawful money left in its hands by the banks as a special deposit, but treats it as part of its general quick assets.[1] The effects of this process have been, on the one hand that the government's nominal holdings of cash have been considerably swelled, and on the other hand that the bank notes outstanding have diminished less fast than the banks have given up their circulation. There has been steadily outstanding, during the last ten years, a considerable amount of bank notes which we may called doomed,—notes which the banks have given up, but which have not yet come into the Treasury for payment and destruction. In the foot-note are given the figures for recent years as to the gross circulation of notes,—namely, those actually in use by the public,—and as to the net circulation, ascertained by subtracting from the gross amount the doomed notes.[2]

[1]Indeed, the silver act of 1890 specifically prescribed that "the balances standing with the Treasurer of the United States to the respective credits of national banks for deposits made to redeem the circulating notes of such banks, and all such deposits received hereafter for like purpose, shall be covered into the Treasury as a miscellaneous receipt, and the Treasury of the United States shall redeem from the general cash in the Treasury the circulating notes of said banks which may come into his possession subject to redemption."

[2]National bank notes outstanding (in millions of dollars):

	Gross (total outstanding).	Net (less lawful money deposited).
Oct. 31, 1882	362.7	324.3
" 1883	352.0	316.0
" 1884	33[illegible].6	291.8
" 1885	315.8	276.3
" 1886	301.5	219.7
" 1887	272.0	169.2
" 1888	239.4	152.4
" 1889	202.0	130.2
" 1890	179.8	125.0

It should be noted that not all the lawful money deposited for the payment of notes in process of retirement comes from banks

Looking at the gross circulation, which represents the notes passing from hand to hand in the community, we find a diminution of one hundred and twenty millions between 1886 and 1890. Our bank notes have always been made up of the smaller denominations. Since the resumption of specie payments, when the banks were no longer allowed to issue new notes of less than five dollars, they have been mainly in denominations of five, ten, and twenty dollars. As these notes disappeared, a void was made in the every-day money of the public, and a place so made for the silver certificates. The decline in the bank notes has been great and rapid since 1886, and the silver certificates consequently have been easily absorbed into the circulating medium.

The other important factor in the situation after 1886 was the legislation of that year in regard to the denominations in which silver certificates could be issued. The act of 1878, it will be recalled, had permitted the issue of certificates only in denominations of less than ten dollars. The circulation had been almost exclusively in denominations of ten and twenty dollars; and the limitation to these denominations was of great and probably unexpected effect in preventing the silver currency from finding its way into the only place where it was likely to stay,—in the every-day money of the people. In the general appropriation act of 1886, a rider was inserted in the appropriation for the Bureau of Engraving, authorizing the printing of certificates of one, two, and five dollars.[1] We have already

which are reducing their circulation; a small part of the total deposit being from banks which have failed, or are in process of voluntary liquidation.

[1] *Statutes at Large*, vol. XXIV, p. 227; June 30, 1886.

seen that the Secretary of the Treasury made an endeavor,—even before this change was authorized,—to promote the circulation of the silver dollars, first by cutting down the number of legal-tender notes of small denominations, finally by ceasing to print them altogether. Under these circumstances, the small silver certificates, of which the issue began immediately after Congress authorized them, were rapidly, almost eagerly, absorbed by the public. In the autumn months of 1886, the certificates for one, two, and five dollars, were issued as fast as they could be printed.

As it happened, the revival of business activity became more pronounced at this same time, and there was room for a general expansion of the retail currency of the community. Since 1886, the volume of silver currency has gained almost steadily on the total coinage of the dollars; and with the beginning of 1889, practically all of the dollars coined were in circulation, chiefly, of course, in the form of certificates. The increase, it need hardly be said, has been mainly in the certificates for one, two, and five dollars. These small certificates have taken the place of small United States notes; while the decline of the bank note circulation has made way for the additional amount of larger United States notes issued in place of the small ones retired. Withal, there has been a steady growth in the aggregate amount of the money of these denominations used,—the natural result of the steady growth of the community in population and wealth.

We may summarize the results of the changes described in the preceding pages in three tables, giving the amount of large change, or money in

denominations of twenty dollars and less, outstanding at three important dates,—at the close of the fiscal year (June 30) in 1878, 1886, and 1890:[1]

[Figures indicate millions of dollars.]

1878	$1	$2	$5	$10	$20	Total
U. S. notes..........	20.9	20.9	54.7	65.5	62.7	224.7
Bank notes..........	4.0	2.8	93.9	104.1	68.6	273.4
Silver certificates....	......	....	....	.1	....	.1
Silver dollars........	.9	.....	....	....	....	.9
Total.............	25.8	23.7	148.6	169.7	131.3	499.1

1886	$1	$2	$5	$10	$20	Total
U. S. notes..........	17.6	18.2	85.6	66.6	55.1	243.1
Bank notes..........	.4	.2	83.3	101.5	73.0	258.4
Silver certificates....	......	....	.. ....	50.3	44.9	95.2
Silver dollars........	54.1	....	....	....	....	54.1
Total.............	72.1	18.4	168.9	218.4	173.0	650.8

1890	$1	$2	$5	$10	$20	Total
U. S. notes..........	3.3	2.9	57.7	90.4	111.5	265.8
Bank notes..........	.4	.2	52.0	59.5	45.5	157.6
Silver certificates....	31.1	22.5	102.1	111.5	26.3	293.5
Silver dollars........	56.1	....	....	....	....	56.1
Total..	90.9	25.6	211.8	261.4	183.3	773.0

[1] The figures are compiled from the *Report of the Treasurer*, 1890, appendix, table No. 28. It should be noted that silver certificates "outstanding" here include certificates which have been paid into the Treasury, and are held by the Treasury against itself; to this extent the figures do not indicate certificates held by the community. In recent years, the Treasury cash has included very few of

It will be seen that the one dollar and two dollar notes, which in 1878 were greenbacks and bank notes, were in 1890 almost entirely silver certificates. There is a very striking increase, between 1878 and 1890, in the total number of one dollar pieces outstanding; but this increase, so far as actual circulation goes, is in some part more apparent than real. A large part of the silver dollars which are out of the Treasury are not in use as money. Some are doubtless hoarded: it is said that the negroes in the South have hoarded considerable numbers. Some have been melted by jewellers and others for use in the arts.[1] Though permanently out of the Treasury, the fifty or sixty millions of silver dollars are probably not all in actual monetary use.

In the larger denominations, the proportion of silver certificates grows steadily less. They form

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the smaller certificates, and indeed not many certificates of any kind. On the other hand, the Treasury held in June, 1886, nearly twenty-eight millions of certificates, in which are doubtless included a considerable number of the ten and twenty dollar pieces counted in the text as in circulation. The real increase in the large change of the community has therefore been greater than the figures indicate.

The bank notes of $1 and $2 reported as outstanding in 1886 and 1890, are chiefly notes which, having been lost or destroyed, have not been presented for redemption. They are therefore only nominally "outstanding."

[1]It may seem strange that jewellers should melt silver dollars, when they can buy with them, as money, 20 or 25 per cent. more silver bullion than the dollars contain. No doubt large manufacturers are careful not to incur such a loss. But a jeweller using silver on a small scale, and producing an article whose value rests little on the bullion used, and chiefly on the labor put into fashioning it, may procure his silver by the handy process of melting down a dollar or two. I am assured by Mr. Leech, the Director of the Mint, than whom there could be no better informant, that this takes place to no inconsiderable extent.

about one-half of the five dollar pieces, two-fifths of the ten dollars, and but little more than one-sixth of the twenty dollars. If we were to carry the figures to the higherd enominations, we should find the silver currency in less and less proportions. They form about eight per cent. of the fifty dollar notes "outstanding," and less than this proportion of the one hundred dollar notes. In the denominations above one hundred dollars, their use is insignificant, or ceases entirely.[1]

The whole amount of money in these denominations was, in 1890, seven hundred and seventy-three millions of dollars. In 1878 it was very nearly five hundred millions. The increase in twelve years, therefore, was two hundred and seventy-three millions. That increase has come chiefly from the addition of the silver dollars and certificates to the circulating medium. There has been also some increase in the use of greenbacks of denominations of twenty dollars and less, notwithstanding the great shrinkage of the one and two dollar notes.

[1]The total of silver certificates outstanding was, in June, 1890,

In $1	notes,	31.1 millions.
2	"	22.6
5	"	102.1
10	"	111.5
20	"	26.3
50	"	3.3
100	"	4.3
500	"	.25
1,000	"	.17
5,000	"	none
10,000	"	none
Total,		301.5

Here, again, it must be remembered that "outstanding" includes some certificates held by the Treasury against itself, and so not actually in circulation. At this date, the Treasury held 4.3 millions in its cash, which probably included a considerable proportion of the large certificates reported as "outstanding."

In 1878, the greenbacks of larger denominations were more used than they are now, being held by banks for reserve and for use in clearing-house payments. Gold has taken their place, in large part for these purposes; which accounts for the increased circulation of greenbacks of the denominations of five, ten, and twenty dollars. The gain in silver and in greenbacks has much more than offset the decline in the bank notes.

Since 1878, then, the total gain in these denominations was two hundred and seventy-three millions, or at the rate of between twenty-five and thirty millions a year. Between 1886 and 1890 the gain was at the rate of fully thirty millions a year. That sum probably represents the amount of money for every-day use which is called for each year by the regular increase of population and wealth. A figure not varying much from this is reached if we calculate the annual increment in another way. The total amount in 1890 was seven hundred and seventy-three millions. To this should be added the gold in general use, while a deduction should be made for the silver dollars which are outstanding, but not in use as money. As to the gold in the country, there are some perplexing questions, to which allusion will be made at a later stage of this discussion. But it is certain that, except on the Pacific coast, gold appears but rarely in everyday use. Ample allowance will certainly be made for the gold which is in every-day circulation, if we put it at one hundred millions or thereabouts. In other words, we shall probably err on the side of excess if, to allow for the gold in use, we raise the sum of seven hundred and seventy-three millions, as just reckoned, to the round

sum of nine hundred millions, and name the latter amount as the total volume of money used in denominations of twenty dollars or less. This would mean for a population of sixty-two millions about fifteen dollars a head. The occasion for the use of money of this kind increases with the growth of population; not indeed in any exact correspondence, with a check at one time and a rapid start at another, yet on the whole in a rough proportion to the increasing numbers of the community. If the population grows each year at a rate of between 1,300,000 and 1,500,000, we shall have room for an increase, in round numbers, of about twenty million dollars a year in the money for every-day use.

Calculations of this sort are always uncertain, and the results just reached cannot pretend to anything but a rough approximation to the truth. But they rest on a fairly secure basis of fact, and certainly help in giving an answer to the question which has often been asked in recent years: How much additional money can be used and absorbed, under existing conditions, by a country growing as rapidly as the United States? Those channels of circulation in which alone the silver currency issued under the act of 1878 succeeded in making its way,—those, we may add, in which it is comparatively harmless, so far as the maintenance of the gold standard is concerned,—will take up twenty or thirty millions a year. In other words, so much additional money, in denominations of twenty dollars and less, might be put forth by the government year by year, and would find a steady and permanent use. In years of depression like 1884-85, it would make its way into circulation sluggishly; in years of great activity

like 1880–81, more could be easily absorbed; but the average would be somewhere near the figures just stated. It appears, then, that the issue under the act of 1878 was not on the whole excessive. By a lucky accident, it corresponded with sufficient closeness to what the community was in a position to use for its growing transactions.

VI.—The Act of 1890.

We have now completed the history of the first three periods in the silver situation, and may proceed to consider the fourth and last, in the midst of which we now are (November, 1891). The act of July 14, 1890, repealed the silver act of 1878, and so brought to a close the precise experiment tried under that measure. The new experiment has been in progress but a short time, and any discussion of its working at this early date must therefore be provisional. But the new act, notwithstanding some important differences, continues in essential points the policy of its predecessor, so that the working of the latter throws light on the events of the year just elapsed and on those to be expected in the future.

The act of July 14, 1890, is even more remarkable than that of 1878. It is unique in monetary history. It provides that the Secretary of the Treasury shall purchase each month at the market price four and a half million ounces of silver bullion. In payment he shall issue Treasury notes of the United States, in denominations of between one dollar and one thousand dollars. These Treasury notes, unlike the old silver certificates, are a direct legal tender for all debts, public or private, unless a different medium is

expressly stipulated in the contract. They differ from the silver certificates in another respect: they are redeemable either in gold or silver coin, at the discretion of the Secretary of the Treasury. The indirect process of redemption which, as we have seen, was applied to the silver certificates, is replaced for the new notes by direct redemption. The avowed object is to keep the silver money equal to gold, for it is declared to be "the established policy of the United States to maintain the two metals at a parity with each other on the present legal ratio, or such ratio as may be provided by law." The act of 1878 is repealed; but the coinage of two million ounces of silver into dollars is to be continued for a year (until July 1, 1891). Thereafter it is directed that only so many silver dollars shall be coined as may be needed for redeeming any Treasury notes presented for redemption. Practically this means that the coinage shall cease; redemption in silver dollars will not be called for under present conditions. The coinage of silver dollars accordingly was suspended by the Treasury on July 1, 1891; a change which was the occasion of some vociferous abuse and equally vociferous praise, but which in reality was of no consequence whatever.

The monthly issues of the new Treasury notes vary, like those of the old silver certificates, with the price of silver. But the new issues vary directly with the price of silver, while, as we have seen,[1] the old issues varied inversely with the price. The volume of Treasury notes issued is equal to the market price of four and one-half million ounces of silver. If silver sells at $1.20 an ounce, the monthly

[1]See p. 9, above.

issue of notes will be $5,400,000; if at $1.00 an ounce, $4,500,000. For a month or two after the passage of the act, the price of silver advanced rapidly, and at its highest, on August 19, 1890, touched $1.21. After September a steady decline set in, and during the present year (1891) the price has been not far from $1.00 an ounce. On the whole, the issue of silver currency (for by that name we may still call the new notes) has been, and probably will continue to be, at the rate of between fifty and sixty millions of dollars a year: about twice as large as was the issue under the act of 1878. And this great increase in amount is the most important difference between the two measures. The new method of making the additions to the currency is different from that of the earlier measure, and the Treasury notes of 1890 are different in externals and in some legal respects from the silver certificates of 1878: but the important difference in their effect on the community arises from the fact that their quantity is larger.

One change has indeed taken place in the working of the new act, apart from the increase in the issues: a change in the mode in which the banks have dealt with the Treasury notes. Shortly after the passage of the act, some sort of understanding seems to have been reached between the Treasury department and the banks of New York. The banks came to an agreement that the new notes were to be treated as "current funds," receivable in all payments, clearing-house settlements included. No doubt the change in legislation which made them a direct legal tender, and directly redeemable

in gold on demand, had something to do with this change of policy. That change leaves no ground for any distinction between the Treasury notes based on silver purchases, and the old United States notes, or greenbacks: both sorts of notes being legal tender, and both direct claims on the Treasury gold reserve. But the willingness of the banks to accept the new notes freely is also to be ascribed to their disposition to throw no obstacle in the way of the Treasury in its action under the new régime. The experiment of trying to keep the large issues of 1890 at par with gold is therefore being tried under conditions more favorable than those under which the old silver issues were put out. During the first year of the new experiment (1890–91) large quantities both of the new notes and of the old legal tenders were paid out by the sub-Treasury at New York to the banks of that city. Fully one-third of the payments were in those forms of money; a striking contrast to the almost exclusive use of gold in preceding years. Similarly the banks of New York, in settlements between themselves at the clearing-house, instead of using gold and gold certificates only, have made considerable payments in one or the other of the legal tender notes.[1] (See note page 54.)

Turning now once more to the chart, the reader will note the changes since the date when the act of 1890 went into effect (August 14). The unbroken line indicating the total silver currency makes a distinct angle at that date, soaring upward more rapidly, and so marking the greater issues of the new act. The dotted line indicating the silver currency outstanding responds to the upward movement,

though with some irregularities to be presently described in more detail. By far the most striking change, however, is in the gold reserve, which goes down sharply and almost without interruption from the middle of 1890 to the middle of 1891, touching in midsummer of 1891 a point very nearly as low as that reached in 1885. Between July, 1890, and July, 1891, it fell from one hundred and ninety mil-

[1]From the Report of the Comptroller of the Currency for 1891 it appears that the payments by the New York sub-Treasury to the clearing-house were:

	Gold certificates.	Treasury notes.	Legal tenders and change.
In the year ending Oct. 1, 1890.....	249.6	4.5	1.3
In the year ending Oct. 1, 1891.....	138.8	41.1	25.0

The figures denote millions of dollars.

From the same source it appears that the balances between banks at the New York clearing-house were settled as follows:

	Gold certificates.	Treasury notes.	Treas-ry certificates for legal tenders.	Legal tenders and change.	Percentage of gold to total balances.
In the year ending Oct. 1, 1890............	1,785.3	6.9	5.0	5.8	98.4%
In the year ending Oct. 1, 1891............	1,028.4	102.4	353.5	100.2	64.9%

The figures again denote millions of dollars, except in the last column. The Treasury certificates for legal tenders, it should be noted, are now issued on the deposit not only of the old United States notes, but of the Treasury notes of 1890 as well.

lions to one hundred and seventeen,—a loss of over seventy millions in twelve months.

Another change took place during this same period, not shown on the chart, but closely connected with the decline in the Treasury gold,—a change in the character of the money taken in by the government for taxes. The receipts from customs at the port of New York indicate the nature of this change. Since 1885, when, it will be remembered, the gold receipts showed an ominous decline, the payments on account of customs had been almost exclusively in gold; and they so continued during the first half of 1890. The figures in the note show that in the fall of 1890 there was a distinct drop; then a recovery at the close of the year; followed in the first half of 1891 by an almost complete collapse, the percentage of receipts in gold going down to 60, 40, 20, and at last to 12 per cent. Through four months of the summer of 1891 the Treasury was receiving, at the point where more than half of its total revenue is collected, only 12 or 14 per cent. of gold, the rest being in silver certificates and in legal tenders of the new and old issues. In October there is a slight recovery in the gold receipts, and in November they again rise to over 40 per cent.; while the total gold holdings also show a gain in the autumn months.[1]

Such are the salient facts. For their explanation, account must be taken of the general conditions of the year. The first issues of the new Treasury

[1]The following table shows the monthly receipts from customs at New York city since January, 1890, and the percentage of each kind of money received; the final column giving the net amount of

notes were made in the latter half of August, 1890. At that point in the year an upward movement in the silver currency in circulation generally begins. Since the autumn months, when the crops are moved, are almost invariably marked by a flow of currency to the West, it was to be expected that during this first stage there would be no difficulty in getting the new notes in circulation. The regular expansion of the silver currency accordingly took place. In November, 1890, however, came an event which had important effects on the Treasury as well as on the community: the collapse of the great banking house of Barings, which, though it led to no acute panic,

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gold held by the Treasury at the close of each month. The figures in the first and last columns indicate millions of dollars.

Months.	Total receipts.	Gold coin. Per cent.	Silver coin. Per cent.	Gold certificates. Per cent.	Silver certificates. Per cent.	U. S. notes. Per cent.	U. S. Treasury notes. Per cent.	Net gold in Treasury, coin and bullion.
1890.								
January	15.2	0.1	0.0	92.5	2.8	4.6	....	177.3
February	13.8	0.1	0.1	95.0	1.8	3.0	....	188.0
March	12.5	0.1	0.1	95.7	1.4	2.7	....	185.3
April	13.6	0.2	0.1	95.4	1.6	2.7	....	186.2
May	10.6	0.2	0.1	93.6	2.5	3.6	....	190.5
June	14.4	0.1	0.0	94.5	2.7	2.7	....	190.2
July	17.1	0.1	0.1	95.3	2.0	2.5	....	184.1
August	12.9	0.1	0.0	91.7	1.7	3.0	3.5	185.8
September	15.7	0.1	0.1	85.5	1.4	1.9	11.0	148.0
October	16.0	0.2	0.0	80.9	1.3	2.1	15.5	156.3
November	10.1	0.3	0.1	80.4	1.7	2.9	14.6	162.4
December	10.7	0.3	0.1	87.8	1.9	3.0	6.9	149.0
1891.								
January	16.7	0.1	0.0	88.5	2.1	4.1	5.2	141.7
February	12.2	0.1	0.0	81.0	6.6	5.0	7.3	149.7
March	10.5	0.2	0.0	64.9	16.5	6.0	12.4	148.1
April	7.7	0.2	0.0	47.0	20.0	7.2	25.6	141.7
May	7.4	0.2	0.0	27.8	26.8	15.0	30.2	133.2
June	9.1	0.2	0.0	12.3	14.0	44.6	28.9	117.7
July	11.3	0.2	0.0	14.9	8.5	49.0	27.4	121.1
August	10.4	0.3	0.0	12.6	5.2	50.5	31.5	132.5
September	9.9	0.1	0.1	11.7	4.4	55.3	28.4	132.5
October	9.3	0.2	0.0	19.8	4.4	44.0	31.6	127.7
November	8.5	0.1	0.0	43.5	2.8	31.3	22.3	129.2
December	9.3	0.1	0.0	65.3	3.1	14.8	16.7	130.7

brought about many of the phenomena characteristic of a commercial crisis. At first, there was the call for ready cash which is usual under such circumstances. Bankers and others having heavy demand liabilities desired to increase their holdings of money, and the New York banks, in which the central reserve of the banks of the United States is kept, resorted to those expedients in the way of strengthening their reserves which experience has shown to be effective safeguards against acute panics.[1] The Treasury exerted itself also to tide over the emergency by paying out cash liberally, not only in its ordinary disbursements, but by the prepayment of interest on bonds. The disposition of banks in the interior to call back some part of their reserves from New York, combined with the usual westward movement of currency, tended to carry the various forms of paper money away from New York. Consequently there was no accumulation of paper and silver currency in that center, and the receipts at the New York custom-house continued to be chiefly in gold.

In the beginning of 1891 the situation began to change. The first stage of anxious uncertainty being over, money was no longer kept on hand in unusual amounts, by banks and financial institutions through the country and tended to return to the metropolis. With some general depression in business operations, cash in the hands of banks tended still more to become redundant, and to make its way to the central reserve depositories. The return

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[1] As to the methods resorted to in the autumn of 1890, as well as at earlier dates, see the chapter on "Combined Reserves," in Professor Dunbar's "Theory and Practice of Banking."

of the currency which had gone to the West and South in the autumn strengthened the flow. Meanwhile the monthly issue of the new Treasury notes was steadily increasing the supply which sought to make its way into general circulation. Some other causes were also at work in the same direction. In September, 1890, a considerable volume of 4½ per cent. bonds, which then fell due, were continued at 2 per cent., and became advantageous as a basis for national bank notes; resulting in an increase, or at least a cessation in the decline, of that form of every-day money. The Treasury, moreover, was no longer in possession of any considerable surplus, and was not willing or able to do what had been done in 1885,—collect and hoard silver currency as it came into its hands. On the contrary, certain large payments of this time, notably those required by the act of 1890 for the repayment of the direct tax, were made in silver certificates. All these causes combined to bring about, during the first six months of 1890, a marked accumulation of various forms of paper in the hands of the New York banks.[1]

The inevitable outcome of the situation was that back-flow of silver and paper money into the Treasury which was noted a moment ago. As the silver currency accumulated in the hands of the banks, it was uesd by preference in making payments to the Treasury, their gold being naturally retained. In

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[1]The holdings of specie and legal tenders by the banks of New York at selected dates in 1890 and 1891 are given below. The specie may be assumed to be practically all gold. In the legal tenders, no distinction is made in the published returns between the United States notes of the old issue and the new Treasury notes; there

1891, as in 1885, the decline in the Treasury's gold receipts was the certain proof of a redundant issue of silver.

Under these conditions, the fact that the new notes were received by the banks from the sub-Treasury in settlement of clearings, was of sensible advantage to the government. Had the situation been the same as in 1885, when silver currency was not available in these payments, the Treasury must have been seriously embarrassed. In that case, it would have been paying out gold, and taking in silver and paper; a process which must have led speedily to a break-down of gold payments. As it was, the dealings between the Treasury and the New York banks during the first half of 1891 must have been chiefly in paper. Legal tenders of the old and new issues were travelling from the banks to the Treasury, and back from the Treasury to the banks; and the success of the government in maintaining its nominal willingness to pay gold to all comers was due to the forbearance of the banks. Gold was called for by them only when needed for export.

being, indeed, no ground for any distinction between them. The figures indicate millions of dollars.

Date.	Specie.	Legal tenders.
1890. July 5	75.4	32.6
September 21	76.4	23.0
November 29	73.2	22.3
1891. January 3	78.6	26.6
April 11	76.7	33.0
May 29	61.0	43.3
June 20	65.4	49.2
July 25	68.3	53.1
September 12	61.7	48.0
October 12	70.1	37.7
November 7	81.9	29.2
December 12	89.8	32.5

As it happened, a turn in the balance of international payments, due chiefly to the complications brought on in Europe by the Baring failure, led at the same time to a heavy export of gold from the United States. The drain was exceptionally large, and fell entirely on the Treasury, whose gold holdings fell to less than one hundred and eighteen millions at the close of the fiscal year, on June 30, 1891. The Treasury had begun the fiscal year with an ample reserve of gold, and was able to part with seventy millions without public signs of embarrassment. But clearly, unless the gold reserve is brought back to the ample amount at which it stood from 1887 to 1890, a repetition of the experiences of 1891 will not pass by without more serious disturbance.

The autumn of 1891 has brought still another turn in the financial and industrial movement, which promises, for a time at least, to relieve the Treasury, and may be referred to here by way of further illustration of the working of the silver currency. The crop year 1891 promises to be similar to the golden years 1879 and 1880, marked by abundance in this country and scarcity abroad. The indications for 1891 are that exceptionally large sums of money will be called for to effect the usual autumnal payments in the West. It may be, also, that we are on the eve of a new period of prosperity in the agricultural regions, which will bring a general revival of activity, with its results of rapid increase in business transactions, revival of speculation, new investment of capital, and expansion of the circulating medium in every form. These conditions would undoubtedly make

more easy the absorption into actual circulation of the enlarged issues of silver currency. Some signs of a change in this direction are already evident. The balance of international payments has shifted again, and some gold has come back from Europe, showing its effects in the increased holdings of that metal, in November and December, by the New York banks. The decline, during these recent months, in the holdings of legal tenders by the banks, shows that these forms of money are making their way more readily into circulation through the country. The flow of gold into the Treasury responds to these conditions: the month of November shows a marked gain in the proportion of gold in the customs receipts, the rise being up to over 40 per cent. in the total for November, and 65 per cent. for December. It would be rash and idle to make predictions for the immediate future; and indeed this discussion of events too recent to permit a complete view, has been introduced only by way of further illustration of the variety of conditions which will affect the working of the new silver issues under the act of 1890.

VII.—General Conclusions.

If now we review the history of the silver situation, we find it leading to one conclusion much at variance with the usual expectations and predictions. The expansion of the silver currency has followed, and not preceded, the rise in prices, the speculative activity, and the other phenomena which are associated with an increase in the supply of money. The general impression derived by the

reader of most treatises and text books on political economy is that an increase in the quantity of money is the direct cause of a rise of prices. But the increase of our silver currency seems to have been effect rather than cause. When it was first issued, in 1878, at a time of quietude in business operations, it caused no expansion or inflation: on the contrary, the Treasury was unable to get the silver into circulation. When the general revival set in during 1880–81, it went into circulation rapidly and in large amounts; but the movement of silver followed, and did not precede, the general industrial change. When the period of depression began in 1884, the Treasury went through another period of slow circulation, and the regular issue of silver currency had not the slightest effect in checking the tendency to depression and falling prices. The attempt to get out the silver money simply led to embarrassment; it flowed back to the Treasury in tax receipts. The phenomenon repeated itself in 1890–91. The attempt to put forth more silver money has had the same effect as it had in 1885; it has caused a back-flow into the Treasury. For an easy and ready circulation of the new issues,—if that is to come at all,—we must await a revival of general industrial activity.

This contradiction between current expectations and the facts as they have actually appeared is a case of a sort not uncommon in the economic field. The growth of our knowledge, or at least its spread, has not kept pace with the development of the phenomena themselves. Explanations which held good half a century or a century ago, and were then propounded by the economists, have gradually filtered into popular knowledge; but by the time

they have become public property, the phenomena themselves have so changed that a new or modified explanation becomes necessary. That the general range of prices depends on the quantity of money, and that an increase in the quantity of money will bring about a general rise in prices, has become one of the commonplaces of economic theory. In this simple form of statement, "money" means what we usually denote by that term,—coin, government notes, bank notes. Five hundred years ago, even a hundred years ago, when almost all purchases were made with actual coin or notes, the proposition in all essentials was true. But the enormous development of credit in modern times compels a modification which has not indeed failed to receive attention from economic writers, yet has rarely been explained as fully, and certainly has not been kept in mind as constantly, as it needs be. The importance of the new conditions is indeed dawning on the public at large; but their full bearing is rarely perceived.

The true way to state the conditions on which, in our day, the general range of prices depends, is to compare the quantity of commodities offered for sale with the total volume of *purchasing power in terms of money.* In this volume of purchasing power, the largest item consists in our day not of actual money, but of credit in various forms. In countries like England and the United States, it consists chiefly in the form of credit supplied by deposit banks,—bank deposits and bank checks. That bank deposits and checks are the means of payment in all large transactions, and in many small ones; that the exchanges carried on through them are greater than those car-

ried on with any other form of currency; that they are completed, through the machinery of clearing-houses, with the use of an insignificant amount of coin or notes,—these are facts familiar enough. Indeed, the effects of credit as a substitute for money have been explained in economic text books so fully that they may be assumed to be well understood: it is the extent rather than the nature of the effects that needs to be insisted on.[1] At any one time, and for considerable lengths of time, the general range of prices, with a given volume of transactions, depends not on the quantity of money simply, but on the volume of credit used as purchasing power; and of this volume of credit the chief item in countries like England and the United States is bank currency in the form of deposits and checks.

In such a state of things the increase of other forms of currency can have, in itself, only a minor effect. Indeed, more than this; so long as the volume of credit, and especially that of the bank currency of checks and deposits, is not affected, there is a strict limit to the quantity of any other form of currency which will in fact be used. It is obvious, for instance, that the quantity of dimes and quarter-dollars which will keep in circulation in any community, at a given range of prices, is a definite and

[1]While the general effects of credit as a substitute for money have been much dilated on, the peculiar effectiveness of bank deposits as currency, and their preponderating importance in the machinery of exchange in England and the United States, have received comparatively little attention. For a systematic exposition, see Professor C. F. Dunbar's *Chapters on the Theory and History of Banking;* and for an examination of the part played by bank deposits as currency in the United States, see a paper by the same writer in the *Quarterly Journal of Economics*, vol. I, p. 401, July, 1887.

determined amount. People need a certain number of small coins for the convenience of making change. If more are issued than are needed for such purposes, the coins will not remain in circulation. They will accumulate in the tills of shop-keepers, street-car companies, and other receivers of small payments, and then make their way into the hands of the banks; finally, the excess will work its way into the government treasury. Under our very sensible legislation on subsidiary coins, the government not only issues such pieces in any quantity desired, but redeems them in any quantity. The amount outstanding is allowed to regulate itself, and, so far from being a factor in determining the general range of prices, is itself determined by the general range of prices. At a higher range of prices more of them will be called for, and the larger denominations may form a greater proportion of the whole; at a lower range of prices less will be called for, and in smaller denominations.

What is true of the subsidiary coins is equally true, in all essentials, of the dollar pieces, the five dollars, the ten dollars. The dimes and quarters and half dollars are the small change of the people; the dollars and five dollars and ten dollars are the large change. They, too, in a country where credit has reached as high a state of development as in the United States, are a sort of subsidiary money. Credit, chiefly in the form of bank deposits, is the main factor in effecting the ups and downs of prices; and the expansion or contraction of credit depends on conditions among which the quantity of money (in the ordinary sense) plays at any given time no important part. The quantity of money which may

affect its fluctuations is not, in any case, the general supply in the community, but the supply held as reserve against deposits in the vaults of banks. Even as to this, the connection with the variations in purchasing power used by the community in the form of bank deposits and checks is only a loose and indirect one.

At all events, the silver money of recent years has not had any direct effect in stimulating the growth of this bank currency, the largest and most important part of the circulating medium. The attitude of the banks toward the silver currency has prevented it from accumulating on their hands, or forming any part of their effective reserves. The contraction or expansion of the currency of bank deposits and checks has therefore not been directly affected by it. The silver issues have supplied, in great part, what I have called the large change of the community; but the total volume of the currency, and the general range of prices, have not been directly affected by them.

This is the key to the history of the silver currency under the act of 1878. It has not caused any expansion in prices. The volume used by the public has been effect and not cause. In times of activity, more of large change has been called for; in times of depression, less; but the large change, for which the silver issues have been used, were not the cause of either rising or falling prices. On the whole and in the long run, and barring periods of difficulty such as the years 1884–85, the quantity issued under the act of 1878 has not been greater than was readily used in the retail transactions of a community growing as rapidly in wealth and population as the United States. The contraction of the national bank notes

has aided in making a ready place for them in such uses. The silver currency under the act of 1878 has simply supplied the community with the increasing amount of money needed for its every-day retail transactions. What will be the case with the issues of 1890, remains to be seen.

It may indeed be said that in the absence of the silver there would have been severe contraction. Prices, in fact, have probably fallen somewhat, notwithstanding the silver issues,—a phenomenon of which the meaning will be discussed in the second part of this paper; and it may be said that the fall would have been even greater, and its effects more serious, if there had been no silver. But in that case it cannot be doubted that some other form of large change would have come into use. It is idle to say what sort of currency would have taken the place now occupied by silver: whether Congress might have rescued the national bank circulation from slow extinction, whether other forms of credit money would have been issued by the government itself, whether still larger amounts of gold would have flowed in from abroad. The only thing certain is that in a country like the United States no real inconvenience or suffering from a scarcity of this sort of money would have been permitted. The fact has been that the silver currency supplied the need, for good or evil, supplanting the bank notes, and supplementing the greenbacks.

VIII.—The Probable Future.—Free Coinage.

So much for the explanation of the past, from which we may turn to some consideration of the probabilities of the future. That consideration must

be brief, and must be rather a forecast of possibilities than a prophecy of events to come. The act of 1890 has practically doubled the issue of silver currency. What will be the outcome?[1]

In considering this question, account must be taken of the decline in the national bank note issues, which was, as we have seen, an important factor in the working of the act of 1878. That decline is likely to continue for a year or two to come, though probably not at so rapid a rate as in previous years. At the beginning of the current fiscal year (on July 1, 1891) there were outstanding about forty millions of doomed bank notes,—notes given up by the banks, for whose redemption the Treasury has become responsible. They come in for redemption at the rate of between fifteen and twenty millions a year. As they are gradually redeemed, room will be made for an equal amount of Treasury notes. Some further decline in the bank note circulation will take place in the future, though probably at a slackening rate; and for two or three years this opening for an easy circulation of a certain volume of silver issues will continue to be available. So long as this is the case,

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[1]There are some minor sources of possible addition to the silver currency, which may be briefly referred to here: (1) In a rider to an appropriation act passed at the session of 1890–91 Congress directed that the trade dollars redeemed under the earlier act of 1888, should be coined into standard silver dollars. The bullion in the trade dollars amounts to some five millions, against which, when coined, silver certificates may be issued. (2) There has been a profit, or seniorage, on the silver dollars which were coined under the act of 1890, between its passage and the cessation of coinage on July 1, 1891. Against this profit, amounting to four and one-half millions, the Attorney-General has concluded that the Treasury can also issue silver certificates. Of course it does not follow that these amounts will be put into actual circulation.

the net addition to the currency will be less than the total issue of Treasury notes. For the immediate future, the allowance on this score will be about the same for the present issues as it was for those before 1890.[1]

Some allowance must perhaps be made for the change in the policy of banks in regard to the new notes, which may lead to a wider use of them in bank reserves and in clearing-house settlements. We have seen that the banks of New York have not only accepted the Treasury notes of 1890 in payments from the Treasury, but have used them in settlement of clearing-house balances among themselves. A general use of the new notes for bank reserves and payments obviously would open a new place for their absorption, and would aid in preventing them from becoming redundant. The cash holdings of the banks increase year by year with their increasing deposits and business; not indeed in the same ratio as the increase of their business, yet in some proproportion to it. If the new notes should be freely held by the banks, their absorption into use would

[1]The changes in the national bank circulation in the year 1890–91 are indicated by the following figures:

	Oct. 31, 1890.	Sept. 9, 1891.
Gross circulation	179.8	167.3
Net circulation	125.0	127.2

The difference between the gross circulation, or total of notes in circulation, and the net circulation, or total of notes based on the deposit bonds by banks, is now about forty millions. This is the amount of the "doomed" issue, consisting chiefly of notes given up by the banks. The banks have deposited legal tender money for redemption of these notes with the Treasury. By a section of the silver act of 1890, the sums so deposited are not held separately as a trust fund by the government, but are covered into its general

be easier than that of the silver certificates was; and, moreover, their effects on trade and industry might be different. Whether the change in policy among the banks of the financial centers will bring about such results, remains to be seen. But the events of the spring of 1891, described in the preceding pages, indicate that the new notes will not form any considerable part of the holdings of the banks; or if they do, that they will simply displace an equal amount of the old legal tenders, formerly so held, and release the latter for every-day circulation. On the whole, the conditions affecting the circulation of the new issues will probably not be substantially different from those which the history of the silver certificate has revealed.

This is not the only element of uncertainty among the factors on which the working of the new issues will depend. No one can foresee what will be the growth of the population and industry of the country; what will be the nature or the amount of the currency, which, under the present standard of value, will be called for by the convenience of the

cash, and the government redeems the bank notes from its general cash as they are presented.

The net circulation has increased slightly during the year, chiefly because the continuance of a large sum of 4½ per cent. bonds at 2 per cent., which has enabled the banks to maintain old circulation, or issue new, without loss. The net circulation may still shrink in the future, though not much. A minimum deposit of bonds is required of every national bank, against which it may issue notes; and this amount of issue may be called the minimum, or required, circulation. Under existing legislation, this minimum circulation for the national banks now doing business is about ninety-two millions, against an actual circulation of about one hundred and twenty-seven millions. There is therefore room for a possible, though not probable, decline of over thirty millions more.

public; what will be the alternations of business activity and depression; what will be the fluctuations in international trade. Prediction in regard to the effects of the legislation of 1890 is therefore nearly as hazardous as prediction would have been in 1879 in regard to the act of 1878. To assert unflinchingly that the issues of 1890 will be excessive, would be rash.

Nevertheless, the experience under the act of 1878, as it has been described in the preceding pages, gives important clues. All the indications seem to be that the issues of 1890 will be excessive in a sense in which those of 1878 were not. Fifty-five million dollars a year of new currency is more than even a community like the United States can easily absorb in its growing use of large change. Unless Congress wipes out entirely the national bank notes or the old legal tenders, or unless a remarkable change takes place in the habits of the community, the issues will hardly be able to circulate in the channels in which the old silver certificates and dollars found their easy place. They will be redundant. Apparently, some signs of redundancy have already showed themselves, in the events of the spring of 1891. The final effect of excessive issues must be to drive out gold on the one hand, and to cause a rise in the general level of prices on the other hand. These final effects,—if such they are to be,—may now engage our attention.

Whether or no the ultimate consequences are clear, the precise mode in which they will be brought about certainly is not clear. That the immediate occasion and the immediate effects of a suspension of gold payments by the Treasury are not easy to fore-

cast, is evident from the striking inconsistency in the predictions made by those who agree in thinking the result a catastrophe. On the one hand, we are told that the effects will be similar to those of the issue of inconvertible paper: inflation, speculation, feverish activity, eventual collapse. On the other hand, we are told to expect contraction. Gold, it is said, will disappear from circulation, and a sharp fall in prices will ensue. The uncertainty as to the probable immediate effects of the change from a gold to a silver standard, of which these different predictions give evidence, are the result largely of the same fundamental misconception of money and monetary phenomena to which I have already referred,—the failure to recognize the vital part played by bank currency in the form of deposits and checks. Any attempt to reach conclusions as to the effects of the new notes, which neglects to consider this part of the medium of exchange, must be futile. But the operation of this medium is of a peculiarly unpredictable sort. Its expansion or contraction depends, to repeat once more, not on the quantity of "money" in the ordinary sense, but mainly in the temper and the expectations of the banks and of the business public. These are things impossible of prediction. The best that can be done is to point out how matters will work under one or two probable sets of circumstances; and this form of prediction I will venture on.

In the first place, we may suppose the time when notes reach the stage of issue in excess of the demand for large change to be one of the ordinary periods of depression and business inactivity, such, for example, as has prevailed during the greater

part of 1891. At such times the banks have plenty of cash in their vaults; they find it difficult to induce business men to increase their credits and deposits; the industrial current is sluggish, and is not easily moved by a fresh inflow. The notes which the government would pay out to bullion-sellers, or to other creditors, would accumulate in bank vaults, and thence more and more of them would flow back into the Treasury. A larger and larger proportion of the government's revenue would be received in these notes, or in some sort of money other than gold. Meanwhile, gold would be paid out to such as called for it. If the period happened to be one of an unfavorable balance of trade, and if there were a need of shipments of money abroad, the drain would fall entirely on the government. By a process of this sort, the Treasury might be drained of its gold, and brought to a suspension, while yet no effects in the direction of inflation or of rising prices has showed themselves.

Assume now conditions of a different sort: good times and active business, hopefulness on every side, large new investments of capital, a burst of speculative activity. An additional amount of large change will then find its way into use with greater ease. At the same time, accommodation from the banks is in demand, their loans and deposits increase, their reserves are small in proportion to deposits. These are the conditions under which a free use of the new notes by the banks would be most likely to have important effects. If the new issues, so far as not absorbed by the public, were readily used by the banks for reserve, they would aid in enabling bank loans and deposits to mount higher and higher.

Then both forms of the currency would expand: both the money of every-day use, and the bank currency of large transactions. All the phenomena which precede a commercial crisis might be looked for,—active speculation, more or less of rash investment, over-trading, rapidly rising imports. The rise in imports would necessitate sooner or later an outflow of gold; while the speculative activity would culminate in the crisis. The drain of gold, which might come before the crisis and so aid to precipitate it, or might come after it in the subsequent period of dullness, must fall on the Treasury. In this case, the phenomena of inflation and rising prices precede the conditions under which a suspension of gold payments by the Treasury becomes possible or probable.

If the stage of suspension of gold payments were reached, the immediate results in all probability would not be of a disastrous sort. Gold would doubtless command at once a premium over other forms of money. The extent of that premium would depend partly on the urgency of the needs of bankers, importers, and others having gold payments to make abroad or at home; but it would be in large part a matter of speculation as to the future policy and the financial prospects of the Treasury. Gold would not disappear from circulation, for the simple reason that there is none of it in circulation to disappear. It would carry us too far from our subject to examine the extent and location of the gold supply in this country. The Treasury officers publish regularly certain statements as to the amount of gold in the country, of which I can here say only that they rest on an uncertain basis, and in my opinion exaggerate our holdings of that metal. At all events, the

only amounts of substantial importance for the currency situation are those held by the banks and by the Treasury.[1] The amount held by the Treasury, after the suspension of gold payments, would be simply a hoard. That of the banks would continue to perform, after the breakdown as before, the function of a reserve for deposits. No depositor or creditor could get hold of it; if he insisted on payment from his bank, in expectation of getting gold, he would receive only "current funds," which would be at a discount compared with gold. If the premium on gold lasted for some time, if the Treasury failed to resume, or if Congress took no steps toward a return to gold payments, the banks doubtless would dispose of their gold from time to time at a premium, and reap the profit of the operation. This was their good fortune during the Civil War, when, at one time or another between 1862 and 1865, they disposed of their gold at a high rate in exchange for the depreciated greenbacks.

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[1] For July 1, 1891, the Director of the Mint estimated the monetary stock of gold in the United States thus:

In the Treasury	239.8	millions.
In national banks	94.4	"
In other banks and in individual hands	312.9	"
Total	646.6	"

The stock here credited to the Treasury is that physically in its possession. Of this stock, the Treasury owned, deducting gold certificates outstanding, 119.2 millions; while the national banks owned, adding gold certificates held by them, 158.3 millions.

It will be seen that three hundred millions are stated to be in "other banks" (state and private banks) and in individual hands. There are no means of ascertaining with accuracy how much gold these "other banks" held; but if gold bore the same proportion to their total cash, as the gold held by national banks bore to the total cash held by these, they would have had in the neighborhood of fifty millions of gold coin. (See the figures given by the Comp-

The question is now easily disposed of whether there might be a contraction of the currency in consequence of the suspension of gold payments. It has just been said that there would be none from the disappearance of gold. But there might be a contraction of credit which would have the same effect,—indeed, a greater effect than a diminution in the quantity of coin or of paper money. The final step of suspension of gold payments by the Treasury might cause, more or less reasonably, an uneasiness among the mercantile public, the banks, the foreign and domestic holders of securities, which would lead to a sharp contraction of credit, and especially of bank credits and deposits. Such a change would mean a real, perhaps a serious, contraction of the circulating medium, and a real fall in prices.

Certain other factors may be noted, affecting the permanent and the temporary situation of the Treasury under such contingencies as have just been described. At any given time, the financial condition of the Treasury will be of importance. A large

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troller of the Currency in the *Finance Report* for 1890, p. 439.) This would leave probably two hundred and fifty millions of gold,—certainly a good deal over two hundred miliions,—"in individual hands," that is, in every-day circulation. As the total bank note circulation at the same date was one hundred and eighty-six millions, of which over twenty millions was in bank vaults, we should expect gold coin to be at least as plentiful in every-day circulation as bank notes. But certainly it is not so common. Except on the Pacific coast, it is very rarely seen. Some sums may be in hoards; yet any considerable amount of hoarding in a community like the United States is exceedingly improbable. It is much more probable that there is a mistake in the official estimates. These rest on intricate calculations as to the imports, exports, domestic production, consumption in the arts, and other factors, some of which bring large possibilities of error. On the whole, I have little doubt that the Treasury estimate is greatly in excess of the actual stock.

surplus, or a large excess of revenue over payments, will enable it to hold its own and maintain gold payments without serious difficulty under conditions which would lead to a break-down if the cash holdings were small and the expenditure exceeded the revenue. In 1884–85 and in 1890–91 the outcome would have been at least uncertain, if the Treasury at both times had not begun with a large accumulation of gold. Further, it is conceivable that a drain setting in at a time when the Treasury gold is low, may be met, and embarrassment for the time being warded off, by a process of borrowing gold, or of selling bonds for gold. It has been suggested that the resumption act of 1875 authorizes the Secretary of the Treasury to sell bonds at his discretion for the purpose of redeeming United States notes of the old issue, and that this power might be exercised to enable the Treasury, if in straits, to secure an additional stock of gold. It is by no means clear that such a power is conferred by the resumption act. Yet the present Secretary of the Treasury has publicly intimated his intention to resort to this power in case of need; and some such expedient might serve to tide over a period of temporary embarrassment, or ward off for a time the results which may be expected from permanent sources of danger.[1]

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[1]In a public address at the dinner of the New York Chamber of Commerce, on November 17, 1891, Secretary Foster stated his opinion that the resumption act gave authority for the issue of bonds to replace or increase the reserve fund of one hundred millions, and intimated that he would make use of the authority in case of need. The language of the resumption act is that "to enable the Secretary of the Treasury to prepare and provide for the redemption" of the notes, he is authorized to sell bonds "to the extent

A permanent break-down of gold payments by the Treasury, and a permanent adjustment to a silver basis, can come only from a foreign drain of gold. It is true that a suspension is possible without it. A heavy deficit in the finances might lead to it; or an inpouring of notes and silver, instead of gold, in the tax receipts. From embarrassments, however, due to these causes, uncomplicated by a foreign drain, the Treasury may recover with comparative ease. But if the gold does not stay in the country, and flows abroad, the loss and the danger are permanent. A foreign drain may come at any time, and from various causes: from higher prices leading to heavier imports, from short crops, from heavy sales in this country of securities held by foreign investors, from a foreign war causing a demand for ready cash in the commercial centers of Europe. Any gold that flows abroad is not likely to return. It would be rash to say that the return of part of it is impossible or improbable; but our issues of Treasury notes are filling up the channels of circulation so rapidly that its return is improbable. Exceptional conditions of international trade, such as those which promise to prevail during the fiscal year 1891–92, may indeed reverse the normal state of things, and cause a large quantity of gold again to flow to the United States. The possibilities in this direction have already been referred to, and serve to emphasize what has been said more than once in this paper as to the hazard of specific prediction in regard to the results of any monetary experiments.

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necessary to carry this act into full effect." It may be a question whether the language confers authority to sell bonds for an indefinite period after resumption has once been accomplished.

The doubts which have been expressed in the preceding paragraphs as to the mode in which the issues of more silver money will work, and the corrections which have been suggested as to current predictions and expectations, may leave the reader uncertain whether there is anything clear and specific to be said as the effects of the silver legislation. But it is only as to the promptness of the effects, and the mode in which they will be brought about, that there need be any real doubt. As to the eventual outcome, we may speak without reservation. Eventually, it remains true that an increase in the quantity of money leads to higher prices. In any community whose habits and ways in the use of credit are constant, the superstructure of credit will be, in the long run, proportional to the amount of money permanently outstanding. A permanent increase in the coin forming the basis of the machinery of exchange will be followed by an expansion of credit, both in the form of bank credit and in other forms, and by a rise in prices. The correspondence between the increase in the quantity of money and the rise in prices will show itself only in the course of time, and will probably never be exact; but in the long run there will be some rough sort of correspondence.

The extent of the rise in prices, however, is another subject on which it is hazardous to make any attempt at precision of statement. The premium on gold is usually assumed to measure the depreciation of inconvertible paper or of a silver currency. But the real depreciation, and the serious effect, of the issue of more money, is in the general rise of prices; and of this the gold premium is by no means an accurate gauge. We have seen

in the preceding pages, that the gold premium may set in during a period of depression, of restricted credit, of falling prices; while, on the other hand, a rise in prices, partly the effect of new issues of silver notes, may exist for a time without the accompaniment of a gold premium. Eventually, no doubt, the steady excessive issue of silver notes would bring about both the gold premium and the higher prices. No doubt, too, if the suspension of gold payments proved permanent, the gold premium would correspond pretty closely to the difference between the intrinsic values of the gold and silver dollars, as measured by their power of purchasing commodities. General prices and money incomes, in other words, would rise in about the same proportion as the gold premium. But the rise would be different with different articles, and would take place more slowly with some than with others. It would never show that uniform adjustment to a higher level which we are sometimes to expect. Money incomes, wages, rents, as well as the prices of commodities, would gradually rise, some more, some less, by an irregular and perhaps spasmodic process. Wages of manual laborers probably would advance late; though this again would depend on the state of the demand for laborers, and on the effectiveness of the labor organizations. It would carry us too far to enter into a discussion of the process by which a general rise or fall in prices and money incomes are brought about. Briefly, it may be said that so far as commodities which are the subject of international trade is concerned, the changes in prices would accommodate themselves with comparative rapidity and exactness to the gold premium. Exports and imports would

be on the silver basis more quickly, other commodities, and general money incomes, much less quickly and exactly. In the end, the general rise would ensue.

One subject more may be touched on, before concluding the first part of this paper, namely, the probable working of an act for the free coinage of silver at the present ratio. The consequences of such a measure would differ in degree rather than in kind from those likely to ensue from the present legislation. The break-down of the gold standard would come sooner; the effect on general prices would also ensue, though less promptly and less certainly.

If a measure for free coinage should pass, it would probably contain provisions similar to those of the act of 1890, for the issue of paper representations of silver. Legal tender notes of any desired denomination would be given in exchange for deposits of silver from any quarter and in any amount, at the rate of one dollar for each 371½ grains of pure silver, or 412½ grains of standard silver. The result must be the issue of more currency than is now put forth, and a hastening of the effects. No doubt we cannot be sure that the flow of silver to the United States mint would be as prompt and as enormous as is sometimes predicted. It is impossible to say how great and how rapid the presentation of silver would be. For one month or for six months, perhaps even longer, the amount presented might conceivably not be such as to swamp the Treasury, and for a while the predictions of the free silver advocates as to the concurrent circulation of silver and gold might be

fulfilled.[1] I do not indeed believe that such a temporary success would be attained; for the passage of the measure might be expected to ruin confidence in the Treasury's ability to maintain gold payments, and to lead to the presentation for payment in gold of greenbacks and Treasury notes now outstanding. But even if this direct cause did not bring about the break-down of gold payments, the indirect one of cessation of gold receipts by the Treasury would speedily bring it about. The United States would be the tempting market for the disposal of all the silver in the world available for transmission to this country; and the inflow of silver could not fail in a very short time, by one process or another, to destroy the Treasury gold reserve, and so put an end to the gold standard.

But while the break-down of the gold standard and the appearance of a gold premium would be the early, if not the immediate, results of free coinage of silver, the effects on general prices would be much less prompt. It is not necessary to repeat the grounds for this statement. The part which the silver coin or notes would play in the circulating medium would be the same as that of the silver currency of the past and present, and the action of credit payments and of bank currency must again be taken as much into account. The train of events to be expected would be in essentials

[1]The reader will find an able and ingenious argument to show that free coinage would not drive out gold, in the report of the minority of the Committee on Coinage on the silver bill of 1890-91; printed in *Reports of Committees*, 51st *Congr.*, 2nd *session*, Report No. 3967, pp. 15-30. For a sober statement of the probabilities the other way, see the testimony of Mr. Leech, the Director of the Mint, in the *Hearings* appended to the same report, pp. 32-36.

similar to those sketched already, as likely to follow from the present issues. In the first instance, we might look for falling rather than for rising prices. The break-down of the gold standard might easily be followed by a shock to confidence and a contraction of credit which would cause prices to fall. Eventually, it is true, when the gold premium had become definitive, and the commercial and financial world had accommodated itself to the new basis, we should reach that era of higher prices which it is the object of the free silver advocates to secure. But the era would not come with the mechanical precision which they expect. It would come gradually, by movements affecting first one group of commodities and then another, very likely with occasional relapses to lower prices. The final outcome would probably be delayed so long, and be so much covered up in the meanwhile by other causes affecting the general range of prices, that the ardent champions of free silver would be grievously disappointed in the immediate and visible effects of their panacea.

PART II.

THE ARGUMENT FOR SILVER.

I.—The Bimetallist Arguments.

We turn now to the second main division of this paper: the discussion of the general questions of policy involved in the currency controversy. Is it desirable that we should have more money? Does the maintenance of the gold standard involve injustice or hardship to debtors, or to any class in the community? Does it have any ill effects in hampering industry or checking the advance of production? Is the free coinage of silver, or any measure leading ultimately to a silver basis, fairly open to the objections commonly urged against it on the grounds of dishonesty and injustice? And what, on the whole, is the best method of dealing with the silver problem?

In considering these questions, we must look to the ultimate and permanent results of the silver standard. The details discussed in the first part of the present paper, as to the mode in which the silver issues circulate and the degree of promptness with which they will affect prices, are here of no great importance. Under a silver standard the rise in prices will take place in the end; and we are concerned with the social consequences of such an eventual result.

One word more by way of introduction to this subject. I shall not endeavor to discuss all of the

arguments used on one side or the other, still less to repeat the elementary reasoning which suffices to dispose of many of them. We have had in the last year or two a revival of the crude talk of which so much was heard in the days of the inflationist movement, about the blessings of a large supply of money, the lowering of the rate of interest by increasing the currency, and indeed the attainment of universal prosperity by the simple process of putting forth an abundance of money. The same ancient fallacies which were advanced in the years from 1867 to 1879 to show that plenty of greenbacks were the one saving thing for the republic, re-appear now to show that plenty of silver will save us from ruin. The reader who wishes a discussion of arguments of this sort must turn to the books on the elements of political economy.

I propose here to take up chiefly one set of serious arguments,—those which rest on the changes in general prices which have taken place throughout the civilized world in the last twenty years. The conclusions in favor of a wider use of silver, drawn from such changes, have been maintained by distinguished economists. It is true that the particular plans for the use of silver which are now in vogue in the United States have generally been opposed by these economists. They have urged international agreements for the wider use of silver, and have deprecated independent action by any one nation. But the more thorough-going advocates of free silver in the United States say, certainly with much force, that an international agreement has proved to be simply impracticable, and that if the wider use of silver is to be deferred until there is concerted

action by the great nations, it will never come. If anything in this direction is to be done, some one country must be courageous enough to take the lead, trusting that others will follow in due time. And certainly it is true that the scheme for international bimetallism has practically no prospect of adoption; while, on the other hand, the serious arguments urged by its advocates tell, in some degree, in favor of any scheme for enlarging the use of silver as money. These arguments, moreover, are of weight, and deserve a more painstaking consideration than is often admitted by those who oppose the silver legislation ofthe United States.

The serious and important arguments, then, among those who, both in this country and in Europe, advocate a greater use of silver as money, are derived from the general fall in prices which has been so conspicuous among the economic phenomena of the last twenty years. To that fall they ascribe two evils: first, an unjust increase in the burdens of debtors; and, second, a check to enterprise and to the efficient working of the productive machinery of the community. The increase in the burdens of debtors is one which all economists have pointed to as the result of a general fall in prices, or rise in the value of the circulating medium. The debtor who borrows a hundred dollars now, and repays them five years hence, when all prices have fallen, gives back more than he received. On debts running for short periods of time, changes in general prices are not likely to be great enough to cause serious hardship; but on debts running over long periods the loss to debtors and the gain to creditors will be great and continuing. But such a steady and continuous fall,

it is urged, has taken place since 1873; and the fall is likely to continue further, and to renew its hardships on each new act of borrowing, because its cause is a permanent one. That cause is found in the growing scarcity of gold, which has been selected as the sole standard of value among civilized countries. The production of gold, after having increased with great rapidity in the twenty years following the Californian and Australian discoveries in 1850, has gone on but slowly since 1870. Meanwhile, the population of the civilized countries, their wealth, their production of commodities to be exchanged, have increased with extraordinary rapidity; while the adoption of the gold standard by Germany in 1873, and the resumption of specie payments by the United States in 1879 and by Italy in 1883, have added to the demands for which the scanty annual supply of gold must suffice. Hence the general fall in prices; in other words, the appreciation of gold.

The second effect of the appreciation of gold, in checking industrial progress and promoting industrial depression, has been less insisted on in the United States than in European countries. The classic economists had generally reasoned that a general rise or fall in prices was indifferent, except in regard to the relations of debtor and creditor. If money became scarce, if its value rose and all prices fell, every producer, to be sure, would receive a smaller money income than before, and would have a smaller money capital. But he would be able to buy as many commodities and as much labor as before, and would be in reality just as rich and prosperous. In the middle of the eighteenth century, when economic thought was just beginning to assume its

modern form, David Hume had argued that though a fall in prices is at bottom indifferent to everybody (except as debtor or creditor), it would yet, in its effects on men's spirits and expectations, which are all connected with money and with terms of money, exert a depressing influence on industry, and would so be harmful; while rising prices, though also really indifferent to all, would stimulate hope and confidence, and so arouse to more active exertion and more plentiful production. The younger Mill, in his Political Economy, thought it worth while to enter on a careful refutation of Hume's reasoning. But the bimetallists of our time are disposed to agree with the shrewd Scotchman. They say that the active manager of industry, the business man or entrepreneur, in the first place is always more or less in debt; in the second place, is always buying labor, or materials, or goods, with the intention of selling a product at a later date at an advance in price. He habitually measures his gains in terms of money, and not in terms of the commodities he can buy with the money. In times when prices are falling, he finds it harder to meet his debts, and to dispose of his goods in hand at a money advance over what they cost him. But the business man, or entrepreneur, in our day is the director and initiator of industry. He employs labor, borrows capital, sets the wheels of industry in motion; it is his expectations and fears and hopes which determine primarily whether the investment of capital shall take place in large or small amount, and whether the machinery of production shall move smoothly and effectively, or slowly, hesitatingly, inefficiently. The argument certainly does not lack plausibility; nor can it be said to have

often been squarely met. No doubt it takes the form, in the United States, more frequently of confused encomiums on the inspiriting effects of plentiful money, than of direct reasoning as to the ill effects of too little money, such as I have endeavored to state with fairness in the preceding sentences. Yet it does not lack weighty backing. So eminent an economist as President Francis A. Walker has, within a year, insisted on the evils of a deficient supply of money as strangling the arteries of industrial life.[1]

On the whole, however, the other argument, bearing on the increase in the burdens of debtors under falling prices, has been more often heard in the United States, and certainly has been of more effect. Prosperity, activity, general industrial advance, have been in this country so great and so obvious that the argument as to any check to industry could take serious hold only in occasional periods of de-

[1] "The money supply is not a matter of no consequence. Alike considerable excess and considerable deficiency inevitably become the source of direful ills and woes unnumbered. If of an irredeemable and fluctuating paper currency, that alcohol of commerce, it can be said that 'it biteth like a serpent and stingeth like an adder,' with equal truth may it be added that strangulation, suffocation, are not words too strong to express the agony of the industrial body when embraced in the fast-tightening folds of contracting money supply.

"Unfortunately those who should now be on deck as pilots to guide the ship of State through the narrow sea that separates the whirling gulf of silver monometallism, with a premium on gold and a debased coinage, from the bare and jagged rocks of gold monometallism, with increasing monetary stringency and falling prices, have discredited themselves with captain and crew by denying the very existence of Scylla, and declaring that on that side is the broad and open sea" Address of President Francis A. Walker before the American Economic Association, December 26, 1890; in the *Publications* of the Association, vol. VI, p. 32.

pression or slackened advance. The burden on American debtors from falling prices has therefore been much more steadily complained of, chiefly in regard to the debts of the farmers and other borrowers on a comparatively small scale. No doubt there are other debtors whose burdens are affected at least as much, notably the railways, among whom the practice of borrowing heavily on long time has sometimes had its serious effects. But it is the farmer whose case has received most attention, and in some ways doubtless has deserved it most.

The discussion of the relations of debtors and creditors under the gold standard has led to some further conclusions as to the "honesty" of the gold and silver standards. Those who oppose a silver basis speak of the silver dollar as a "dishonest" coin. But those who attack the gold standard retort that the really dishonest dollar is that of gold. It is pointed out by them that the fall in the price of silver which has taken place since 1873 has not been greater than that in the prices of commodities generally. As compared with commodities, therefore, silver has been more steady in value than gold. The fall in the gold price of silver, which is adduced by the monometallists to show that silver is not a good standard of value, is said to be the very thing which proves it to be a good standard of value; for a given amount of silver will buy the same amount of commodities, roughly, as it would twenty years ago, while a given amount of gold will buy more. If debts had been expressed in terms of silver, the debtor would have had to repay the creditor the same amount of commodities that he received,—not more commodities, as he has had to do, with debts

measured and repaid in terms of gold. So far as the attainment of the closest possible approach to ideal justice is concerned, a silver standard would have served the purpose better than a gold one.[1]

II.—The Effect of Improvements in Production.

The bimetallist agitation for a return to the wider use of silver concurrently with gold first became prominent in the years of depression which followed the crisis of 1873. For some time those who opposed it took the ground that the alleged evils did not exist,—that in fact there had been no permanent fall in general prices. The decline in the years after 1873 was supposed to be simply the usual reaction from the rise in prices which marks a period of speculative activity. It was expected that the upward movement of the next period of activity would bring the average range of prices as high as it had been

[1]It would extend this paper to undue length if I were to enter on any detailed consideration of the intricate questions which arise in regard to the history and statistics of general prices. By far the best and most convenient source of information is Professor Soetbeer's well-known *Materials on the . . Precious Metals and the Question of Standards*, published in Germany in 1887. An English translation is in Mr. Edward Atkinson's Report on Bimetallism in Europe, printed in the United States Documents, *Senate Exec. Doc.*, 50*th Cong.*, 1*st session*, *No.* 34. For convenience of reference I give below Professor Soetbeer's "index numbers," indicating the average annual prices of 114 articles at the free port of Hamburg: undoubtedly the most complete and satisfactory compilation of the sort which has yet been made. The figures, as given in the Materials, run through the year 1885. For the years from 1886 to 1890 I have added index numbers based on the same sources, which Professor Soetbeer has kindly supplied to me. Unfortunately the material on which these figures are based has not been available since 1888.—I need hardly say that the method of measuring prices by index numbers based on simple arithmetical

before. The general revival which set in after 1879 in all civilized countries did indeed check the downward tendency, and in some countries brought about an appreciable rise. But this counter-movement by no means offset the marked fall which had preceded it; and in any case it soon came to an end, and was followed by a new fall, which has continued with no considerable interruption to our own time. It is true that some part of the fall is no more than a recoil from the abnormally high prices of the years 1871–73. It is true, also, that some commodities have shown a tendency to rise, and that in one very important respect,—in money incomes and the money rate of wages,—there has been a striking exception to the general movement. Further, it

averages is far from perfect. The figures are given chiefly by way of illustrating in some concrete way the tendency to falling prices.

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" 1876	128.33	1.156
" 1877	127.70	1.201
" 1878	120.60	1.152
" 1879	117.10	1.123
" 1880	121.80	1.149
" 1881	121.07	1.138
" 1882	122.14	1.136
" 1883	122.24	1.110
" 1884	114.25	1.113
" 1885	108.72	1.065
" 1886	103.99	.995
" 1887	102.20	.978
" 1888	101.93	.939
" 1889	106.13	.935
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must be borne in mind that even the lowered level which has now been reached cannot be described as abnormally low, being still as high as that which obtained at the middle of the present century. But on the whole, the fact of a general fall in the prices of commodities during the last fifteen or twenty years cannot be denied. The fall has not been uninterrupted; it has not been so rapid or general as to bear on the face of it proof of harmful results; but it has been steady, and, in the opinion of the present writer at least, is likely to continue slowly and steadily for some time to come.

Recently, therefore, those who combat the bimetallist reasoning have taken a different position. They have reasoned that while prices may in fact have gone down, the fall is not due, as the bimetallists allege, to an appreciation of gold. It is to be accounted for, they say, by other causes, notably by the extraordinary improvements in the production of commodities. New inventions and the perfecting of old ones have cheapened almost all manufactured articles. Raw materials and food products have been cheapened partly by the discovery of new sources of supply, and partly by that improvement which has been transforming the industrial situation more radically than any other,—the wonderful cheapening of transportation by railways and steamships, which has made the resources of the plains of our West and of the sheep-runs of Australia available for the supply of the markets of London and New York.

So far as this train of reasoning undertakes to explain the mode in which the fall in prices has been brought about, it seems to me impregnable. But in

so far as it endeavors to disprove the appreciation of gold, or to show that the general fall is not due to this appreciation, I have never been able to see its force. In truth, both the bimetallists and their opponents seem to confuse the question when they speak of the appreciation of gold as causing lower prices. The appreciation of gold *is* the general fall in prices. The two are not related as cause and effect; they are simply two names for one and the same thing,—namely, a different rate of exchange between gold on the one hand and commodities in general on the other, by which the same amount of gold buys more commodities than before. When the general fall in prices is admitted, the case of the bimetallists as to the appreciation of gold is established once for all. Improvements in the production of commodities may explain how it happens that they are more abundant, and exchange on less favorable terms with gold, of which the quantity has not been increased by new rich mines or great improvements in production; but the fact of the depreciation of commodities, or of the appreciation of gold, is not thereby explained away.

Nevertheless, the improvements in production do seem to me to have an important bearing on the question in hand: a bearing not on the simple fact of the appreciation of gold, but on the social consequences which are said to flow from it, and therefore on the questions of policy which are here under consideration. A moment's thought will show, for example, that a general increase in the efficiency of labor affects very materially the mode in which a fall in prices acts on the relations of debtor and creditor. If A borrows from B a hundred dollars,

repayable in five years, and if at the end of the five years prices in general have fallen to one-half of the previous rates, B, in paying back to A the one hundred dollars, clearly returns twice as many commodities as he got. But if, at the same time, the efficiency of labor has been doubled by improvements in production, B can produce with the same labor twice as many commodities as before; and he returns to A the product of the same quantity of labor as he received. The classic economists and the socialists (at least some schools of socialists) have maintained alike that the ideally perfect standard of justice in the exchange of commodities and services is equality of sacrifice or labor; that if things so exchanged for each other that equal sacrifice got the same reward, complete justice would be attained. Applying this test to the relations of debtor and creditor in the case supposed, we find it not one of hardship to the debtor, but apparently one of justice to both parties. It is true the creditor gets more commodities than he gave; but he gets the product of the same amount of labor as he devoted to the commodities originally lent; and why should he not share with the rest of the community the benefits of a general increase in the productiveness of labor?

This line of reasoning will become simpler and more concrete if we approach it from another point of view. Reference has already been made to the most striking and important exception to the general tendency of prices to fall, namely, that money wages and incomes in all civilized countries have shown a tendency not to fall, but to rise. Whether the incomes of the rich have increased faster than those of the poor, or whether the movement has shown itself

with rough uniformity for all classes, is immaterial for the present discussion. The admitted fact of a general upward movement alike among rich, middle class and poor, is the significant thing. In other words, there has been an inverse movement of money wages and of the prices of commodities, the one going up while the other went down. Now, such an inverse movement is what must take place in case of any real improvement in material welfare. The only concrete way in which civilized people can become better off, is by being able to buy more,—by their money incomes going further in the purchase of commodities. The improvement may take the form either of higher money incomes, with stationary prices; or that of stationary incomes, with lower prices: or the intermediate form which in fact seems to have occurred, of money incomes rising somewhat and prices at the same time falling somewhat. If we assume a monetary supply that is limited, or does not increase as fast as improved means of production cause the quantities of commodities to increase, one or the other of the two forms last mentioned must be found.[1]

In such a state of things there can hardly be said to be any real hardship for the debtor. It is true that prices have fallen, and that the money he repays the creditor will buy more goods than it did when the loan was contracted; but his own money income has risen, or at least has not fallen, and the repayment of the loan can cause him no special

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hardship,—none greater than he must have expected. The case clearly differs fundamentally from that of a simple rise in the value of money, or general fall in both prices and wages. In the latter case, money incomes as well as the prices of commodities fall, and the debtor really pays back more than he got, not only in terms of commodities, but in terms of labor or sacrifice or income. This result ensues, for example, whenever there is the return to specie payments from a period of excessive paper money issues, such as the United States went through after the civil war. The return to specie payments, and the general fall in both prices and incomes, then meant an increase in the burden of debts contracted in the time of inflated paper prices. The return to specie payments, instead of taking place quickly and decisively after the financial stress of the war ceased, was postponed, and was not finally accomplished until 1879. In the years before the crisis of 1873, when the paper issues were still excessive, and other causes also helped to keep prices high, borrowing took place on a large scale,—borrowing by farmers and individuals, as well as by large corporations. The general fall which began even before 1873, and became great after that year, undoubtedly increased the burden of these debts, adding another illustration of the evils which ensue from the excessive issue of inconvertible paper money. The harsh experience of that time undoubtedly did much to strengthen the inflationist movement; and the after-effects of it, as well as the memory of it, contribute to the silver agitation of the present. But the fall in prices in the United States since 1879, and that in European countries in

the period since 1873, are the result, on the whole and in the long run, of very different causes. They have been due chiefly to the general improvements in production; they have not been accompanied by a fall in money incomes, and they cannot be said to have caused an increase on the burden of debtors.

The reasoning of the preceding paragraphs bears also on the second part of the bimetallist indictment,—that, namely, as to the depressing effects of falling prices on industrial enterprise. Whether a simple rise in the value of money, unaccompanied by any other circumstance, would have the depressing effects which the bimetallists predict and the classic economists deny, is a question radically different from that which in fact presents itself. It may be that in this simple case the bimetallists might prove to be, in some degree at least, in the right, and that the classic reasoning, here as on many other subjects, while sound in the long run, would need some qualifications and correction. In the long run, no doubt, it is immaterial whether prices are high or low, whether money returns fall or rise; and yet it might turn out that the habitual association of gain or loss with "making money" would cause a period of simple falling prices to be one of hesitating investment of capital and unenterprising conduct of business. But what the world in fact has seen has been the complex case of a fall in prices accompanied by great improvements in production. The business man and capitalist has had, to be sure, to deal with falling prices; but the same amount of capital and labor has turned out more commodities than before; and his total money returns, so far from declining, have

generally increased. The money incomes of the managers of industry have shown the same upward movement as the money incomes of other classes in society. So long as this is the case, it is idle to talk of a depressing effect on enterprise from the fall in prices, or of a strangling of the industrial organism from insufficiency of the circulating medium. In fact, the immediate cause of the fall in prices has been the pushing on the market for sale of larger and larger quantities of commodities, produced with profit at lower and lower cost: a state of things fortunate for the community, and surely not depressing for the business man. No doubt the fall in prices has been depressing to those producers who were not so shrewd or so fortunate as to possess themselves of the improved means of production, and who have had to sell the same quantity of goods, brought to market at as high a cost as ever, at lower prices than before. But these unlucky or incompetent persons would have had to go to the wall in any case, whether prices maintained themselves or went down, and their case does not represent the general trend of industrial operations.

This effect on the entrepreneur of improvements and of falling prices combined, doubtless accounts for the failure of the bimetallist agitation to secure any appreciable hold in the business world. The bimetallists, both in England and on the Continent, have labored zealously to engage support among the business men, but never with a degree of success at all proportionate to the energy displayed. The simple reason is that the business world has not been in any state of chronic depression. In the ups and downs of industrial activity there have been periods

before. The general revival which set in after 1879 in all civilized countries did indeed check the downward tendency, and in some countries brought about an appreciable rise. But this counter-movement by no means offset the marked fall which had preceded it; and in any case it soon came to an end, and was followed by a new fall, which has continued with no considerable interruption to our own time. It is true that some part of the fall is no more than a recoil from the abnormally high prices of the years 1871–73. It is true, also, that some commodities have shown a tendency to rise, and that in one very important respect,—in money incomes and the money rate of wages,—there has been a striking exception to the general movement. Further, it

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[1]Such an inverse movement of general wages and prices was predicted by Cairnes before the bimetallic controversy had attracted general attention to the problem; see his *Leading Principles of Political Economy*, Book II, ch. II, §8.

hardship,—none greater than he must have expected. The case clearly differs fundamentally from that of a simple rise in the value of money, or general fall in both prices and wages. In the latter case, money incomes as well as the prices of commodities fall, and the debtor really pays back more than he got, not only in terms of commodities, but in terms of labor or sacrifice or income. This result ensues, for example, whenever there is the return to specie payments from a period of excessive paper money issues, such as the United States went through after the civil war. The return to specie payments, and the general fall in both prices and incomes, then meant an increase in the burden of debts contracted in the time of inflated paper prices. The return to specie payments, instead of taking place quickly and decisively after the financial stress of the war ceased, was postponed, and was not finally accomplished until 1879. In the years before the crisis of 1873, when the paper issues were still excessive, and other causes also helped to keep prices high, borrowing took place on a large scale,—borrowing by farmers and individuals, as well as by large corporations. The general fall which began even before 1873, and became great after that year, undoubtedly increased the burden of these debts, adding another illustration of the evils which ensue from the excessive issue of inconvertible paper money. The harsh experience of that time undoubtedly did much to strengthen the inflationist movement; and the after-effects of it, as well as the memory of it, contribute to the silver agitation of the present. But the fall in prices in the United States since 1879, and that in European countries in

the period since 1873, are the result, on the whole and in the long run, of very different causes. They have been due chiefly to the general improvements in production; they have not been accompanied by a fall in money incomes, and they cannot be said to have caused an increase on the burden of debtors.

The reasoning of the preceding paragraphs bears also on the second part of the bimetallist indictment,—that, namely, as to the depressing effects of falling prices on industrial enterprise. Whether a simple rise in the value of money, unaccompanied by any other circumstance, would have the depressing effects which the bimetallists predict and the classic economists deny, is a question radically different from that which in fact presents itself. It may be that in this simple case the bimetallists might prove to be, in some degree at least, in the right, and that the classic reasoning, here as on many other subjects, while sound in the long run, would need some qualifications and correction. In the long run, no doubt, it is immaterial whether prices are high or low, whether money returns fall or rise; and yet it might turn out that the habitual association of gain or loss with "making money" would cause a period of simple falling prices to be one of hesitating investment of capital and unenterprising conduct of business. But what the world in fact has seen has been the complex case of a fall in prices accompanied by great improvements in production. The business man and capitalist has had, to be sure, to deal with falling prices; but the same amount of capital and labor has turned out more commodities than before; and his total money returns, so far from declining, have

generally increased. The money incomes of the managers of industry have shown the same upward movement as the money incomes of other classes in society. So long as this is the case, it is idle to talk of a depressing effect on enterprise from the fall in prices, or of a strangling of the industrial organism from insufficiency of the circulating medium. In fact, the immediate cause of the fall in prices has been the pushing on the market for sale of larger and larger quantities of commodities, produced with profit at lower and lower cost: a state of things fortunate for the community, and surely not depressing for the business man. No doubt the fall in prices has been depressing to those producers who were not so shrewd or so fortunate as to possess themselves of the improved means of production, and who have had to sell the same quantity of goods, brought to market at as high a cost as ever, at lower prices than before. But these unlucky or incompetent persons would have had to go to the wall in any case, whether prices maintained themselves or went down, and their case does not represent the general trend of industrial operations.

This effect on the entrepreneur of improvements and of falling prices combined, doubtless accounts for the failure of the bimetallist agitation to secure any appreciable hold in the business world. The bimetallists, both in England and on the Continent, have labored zealously to engage support among the business men, but never with a degree of success at all proportionate to the energy displayed. The simple reason is that the business world has not been in any state of chronic depression. In the ups and downs of industrial activity there have been periods

which seemed to confirm the pessimistic accounts of the bimetallist and of other persons malcontent with the present order of things; but in due time the tide has always turned. The industrial situation, while far from perfect in the eye of the social philosopher, and by no means warranting any confident optimism as to the final outcome, has certainly not been such as to dissatisfy the active manager of industry, or to check his ambition or enterprise.

On the whole, then, the fall in prices, when considered in connection with the other great changes which have accompanied it, does not afford so much countenance to the bimetallist proposal as at first sight it seems to. The rise in money incomes and the improvements in production disprove any intolerable burden on debtors, and make it highly improbable that the change has had any general depressing effect on industry.

III.—The Case of the Farmer.

Nevertheless, there is something more to be said, in explanation and justification of the discontent with falling prices, and of the silver agitation which rests on that discontent. While the effects of the fall in prices on debtors as a class and on producers as a whole have not given real grounds for complaint, certain particular debtors and producers have undoubtedly been injured. The case of these latter have given plausibility to the general arguments of the bimetallists, and, what is more important at the present juncture, has given strength to the movement in the United States for more money and more silver.

The situation will be best understood if we contrast for a moment the different modes in which the improvements in production have been brought about in manufacturing industries on the one hand, in agriculture on the other hand. In manufactures the improvements have been better machinery, new processes, labor-saving inventions, the conduct of business on a larger scale, and so the greater and more effective division of labor. In agriculture the main cause of cheaper production has been different: it has been the opening up of new lands and new sources of supply. No doubt there are important exceptions to these general statements. In agriculture there have been advances in the arts,—new plants, better fertilizers, improved implements, more effective ways of cultivating the soil. In manufactures, on the other hand, there have been important changes due to the discovery of new and rich mines of materials, such as coal, iron, copper. But on the whole, the difference holds good. In agriculture undoubtedly the opening of new lands through the improvements in transportation has been the most important single cause at work. The cheapening of agricultural products has been due not so much to the more effective use of the soil already under cultivation, as to the development of soil not formerly available for the supply of the market.

The changes in production and prices have consequently affected the producers in these two branches of production in very different ways. In manufactures all alike have felt them, and have been able to accommodate themselves to the effects. No doubt the shrewder producers adopt improvements and new

inventions first, and, so long as they keep in the lead, have the advantage of their competitors. They gain by doing a large business at lower prices, while for the time being their slower competitors lose. But new processes and new inventions spread over the whole field in no long time. The opening of a new source of supply, on the other hand, cheapens production through a process which the holders of the old source of supply cannot avail themselves of. If wheat is raised in large quantities in Dakota, the price goes down as effectively as if the wheat fields of England and New York had suddenly become more fertile; but as those wheat fields produce no more than before, the farmer or land owner on the old soil has nothing to offset the lower price. This is the explanation of the agricultural distress of which so much has been heard in Europe in recent years, and which has been the main occasion of the revival of protectionist feeling in France, Germany, and other countries of the Continent. The farmer on the old lands does not find in improvements in production any compensation for lower prices. If he owns the land, he must pocket the loss, and perhaps in the end abandon his land and turn to something else; such has been a common case in New England. If he is a tenant on the land, he will probably, after a period of struggle and hardship, get lower rents, leaving the landlord as the permanent sufferer; such has been the outcome in old England. If he was in debt before the change took place, he will find his debts growing more burdensome as his money income goes down: such has been the result with many a western farmer.

It is in causes of this sort that we find the explanation, in part at least, of the restlessness among the western farmers of which the silver agitation is one sign. The fall in the prices of wheat, corn, and other staples, has been due to enormously increased production in regions which were formerly out of reach of the market: in India, Australia, Russia, as well as in California, Dakota, Washington, Oregon, and the far West generally. In the states where the land has been under cultivation for a generation, like Michigan, Wisconsin, Indiana, Illinois, Iowa, Missouri,—almost the whole of the Mississippi valley proper,—the fall in the prices of agricultural staples has meant a serious loss to the farmer, and serious embarrassment to him if in debt. He had expected with a bushel of wheat to meet a dollar of interest or repay a dollar of principal; he finds he needs two bushels. It is not surprising if in the United States he wants higher prices to be attained by the issue of more silver or more money of some sort, and if on the Continent of Europe he asks for protective duties on the products which stream in from distant countries.

We touch here the question, so much discussed of late, as to the causes of the recent agricultural depression in the United States. That depression has been by no means due exclusively to the change in production and prices just described. Other causes must be taken into account if the situation is to be fully and fairly explained; and a few words in regard to them will not carry us too far from the main subject of this paper.

In the first place, it is probable that some of the complaints in regard to the burden of debt

on the farmers are simply a legacy from the old days of inflated paper money. Not a few of the debts of the present go back to the years before 1870, when we had prices high in terms of over-issued paper money. These debts have been renewed and continued, in whole or in part; and the fall in prices has made them heavier and heavier to bear. The evil here again is real, and a remedy is now hard to find. The only conclusion which can be laid down with perfect conviction is that we should make sure of preventing the recurrence of a new era of excessive paper money.

Next, the fall in prices happens to have been intensified in the last few years by one of those periodic stages of general depression which have recurred again and again in our economic history. The process of settling the country and taking up the new lands of the United States has never taken place by regular and steady steps. It has taken place by spells of great activity, accompanied by land speculation and rapid railway building, followed by periods of dullness and reaction, in which the advance for the time being has almost ceased. At intervals of ten years, more or less, the population has gone West *too fast*, and then has waited to recover and take breath for a new effort. In general, the tendency has been to take up new lands quite as fast as, if not faster than, there was profitable use to be made of them. The desire to secure the almost certain future rise in value has caused men to appropriate land and use it before the world really needed its product. Such a rapid advance seems to have taken place in the years 1887 and 1888, indicated by the enormous railway building and the

rapid increase in the population of the far West. The usual reaction has followed, with its lower prices of agricultural products and of farming land. Some part of the agricultural depression of 1889 and 1890 represents no more than this periodical downward turn. The next turn upward may be expected to come in due time; and with it we shall probably hear less of depression in farming, and may expect the silver agitation, the Farmer's Alliance, and kindred movements, to wane and perhaps to disappear entirely.

Still another important circumstance is the general transition in agricultural methods inevitable in those western states which have been settled for a generation or more. When new land is first taken into cultivation the most effective use of it is found in the continuous production of some staple crop like wheat and corn, which can be grown, so long as the cream of the soil is not exhausted, year after year with large returns. After a while, however, the land begins to show signs of exhaustion. The staple crops do not yield as largely as before, and less crude methods of using the soil must be resorted to. Manures have to be applied, and the rotation and selection of crops practised. Meat and dairy products, vegetables, fruits, and the miscellaneous agricultural articles, must take their place in rural economy. This change has been carried through very largely in states like New York, Pennsylvania, and Ohio. In the heart of the Mississippi valley it is now under way; but the transition is trying, and to some of the farmers it is impossible. A good share of the American agricultural population has been so steadily bred to the easy and careless

use of virgin soil that it cannot accommodate itself to more intensive methods. It is constantly moving westward; settling for a generation in one spot, and then, as the land shows signs of exhaustion, moving farther west. The more intelligent and versatile stay behind, adapt themselves to new conditions, and in time prosper under them. The least active also stay behind, and flounder hopelessly in the old ways. But a large number are always moving West. In every state between the Alleghanies and the Missouri river there are large tracts formerly cultivated by native settlers, who have sold their lands, as they showed signs of giving out, to German or Swedish immigrants. These latter have not infrequently paid good prices for the lands: but they have been bred to intensive farming, to careful and varied use of the soil, and they have prospered where their native predecessors have been unwilling or unable to adapt themselves to the new conditions. The period of transition is a hard one for all of the native farmers, whether they stay behind or move on, and the lesson of using the soil with more skill and care is learned only under the pressure of necessity. In such periods all sorts of remedies for hard times make their appearance and have their run.

IV.—The Silver and Gold as Standards of Value.

The simple answer to those who propose a greater use of silver as money has been given in the preceding pages. They have not made out their case against the existing order of things. There are no serious evils due to an insufficient supply of money.

General depression does not exist. Debtors as a class are suffering no hardships. The agricultural depression is not due to the general fall in prices, but to the particular mode in which the changes in the production in agricultural commodities have been brought about, reinforced in the United States by some other causes in no way connected with the currency situation.

These negative reasons apply to the arguments both of those who favor international bimetallism and of those who urge the independent use of silver by the United States. When we consider the importance not only of stability in the medium of exchange, but of general confidence in that stability, the negative reasons ought to suffice for rejecting the proposals of the silver advocates. But there are positive reasons in addition.

The eventual effect of a silver standard, as we have seen, must be to cause a general rise in prices. The rise, no doubt, would not be immediate, and the change not so prompt or its effects so directly felt as is generally predicted. But come it would; and the phenomena of rising prices and incomes would in due time appear.[1] If the present tendency to falling in prices, with stationary or rising money incomes, which are the characteristic features of things as they are, work no hardship to debtors, the contrary case of rising prices and rising money incomes must work hardship to creditors. No doubt that hardship

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[1] It is conceivable that the rise in prices might be counteracted to some extent by that more easy and abundant production of commodities which now causes the tendency to fall. But this cause works out its results very slowly,—more slowly than the silver issues might be expected to work out their effects in the direction of rising prices.

is not so easily seen in the case of a gradual and uneven rise in prices, as it would be if there were an immediate jump of 20 per cent. in all prices. But it is none the less real and serious. With money incomes rising more decidedly and rapidly than they have been rising of late years, debtors would find it easier to discharge their obligations. Creditors, receiving the same amount of money as they had given, would find the purchasing power of that money lessened. Not only would they be debarred from that participation in the improvements in production which the present conditions give them, but they would find their possessions, in terms of commodities, cut down by the extent of the general rise in prices.

If we consider now not only the effects of a silver standard on the relations of debtors and creditors for the time being, but its working as a permanent measure, after the period of transition is past, we find further positive reasons against its adoption. These lie in the conditions of the production and use of silver at the present time. It would carry us too far to enter on any detailed discussion of the history and prospects of the production of silver; the salient and important facts can be stated in a few words. The total production of silver has quadrupled within the last three decades, and more than doubled within the last two decades; and in the five or ten years of the immediate past there have been no signs of a relaxation of the rate of increase. The figures below, which state the average annual production for five-year periods from 1851 to 1885, and the

annual production in each year since 1885, tell their own story:[1]

The average annual product of silver in	1851–55 was	886	thousand kilograms.
" " " " " "	1856–60 "	905	" "
" " " " " "	1861–65 "	1,101	" "
" " " " " "	1866–70 "	1,339	" "
" " " " " "	1871–75 "	1,969	" "
" " " " " "	1876–80 "	2,450	" "
" " " " " "	1881–85 "	2,862	" "
The product in the year	1886 was..................	3,021	" "
" " " "	1887 "	3,324	" "
" " " "	1888 "	3,673	" "
" " " "	1889 "	4 237	" "
" " " "	1890 "	4,600	" "

How long and how fast this extraordinary increase will continue, it is impossible to say. Geologists are disposed to believe that it will not continue very long; but for recent years the hard facts of experience are against them. Certainly the indications for the immediate future point to a further increase in the total amount of silver mined.

Meanwhile, the monetary field over which this growing volume of silver can spread is very

[1] I have used the figures of Professor Soetbeer, as given in his *Materials on the Silver Question* and continued in the *Jahrbücher für Nationalœkonomie*, vol. I (3d series), p. 561. His estimates are slightly larger than those of the Director of the United States Mint, who puts the product in 1889 at 122.8 million ounces troy, equal to about 4,000,000 kilograms; against Soetbeer's estimate of 4,237,000 kilograms in 1889. The difference arises chiefly because Soetbeer puts a higher estimate than the Director of the Mint on the product of the minor countries, *i. e.*, those other than the United States and Mexico. As to the rate of increase in the total product, the two authorities agree.

The United States mine about two-fifths of the total product of silver, and under the act of 1890 buy almost exactly the same amount. The Director of the Mint estimates the silver product of the United States in 1890 at fifty-four million ounces, exactly the amount which the Treasury is required to buy each year under the present law.

limited. In this regard there is a vital difference between the present silver situation and the gold situation at the time of the great gold discoveries of 1848–50. From 1850 to 1860 the production of gold increased at an unexampled rate; but practically all the mints of the civilized world were then open to it, while the half-civilized countries also absorbed large quantities. At the present time the United States is the only civilized country which coins silver except as a subsidiary coin, or which proposes to do so. The countries in which silver is freely coined are India, Mexico, Japan, and a few South American countries. The field for the use of silver in these countries is considerable; but it is at least doubtful whether they will absorb the steadily growing product at existing prices. The United States, at all events, is the one civilized country in which there is a serious proposal to take the risks which lie in the future production and value of silver, and to rest the circulating medium on a basis so narrow and unstable.

On the other hand, gold is freely coined, and is now the basis of the medium of exchange, in all civilized countries. The wider the field over which a given medium of exchange is used, the less likely is it that changes in its quantity will affect its value. The wide use of gold among the countries with which our commercial relations are most intimate and important gives a guarantee that no great and violent fluctuations will take place in its value, or in the general range of prices which in the present long run is determined by its value; a guarantee which we should certainly not have if the United States alone were to use silver.

In fact, gold performs the functions of a measure of value and of a standard of value with as close an approach to perfection as there is any reasonable ground for expecting from any monetary system. Fluctuations in general prices no doubt take place under it; especially the fluctuations due to the variations in the volume of credit currency outstanding, such as have been referred to frequently in the preceding pages. But these are inevitable under any system of coinage; and they are certainly mitigated in their effects by the use of gold as a basis, since the easy flow of that metal from country to country serves to correct sooner or later any exceptional rise or fall in an individual country. Over long periods of time, and for the whole civilized world, we have had, in recent years, that general downward movement of prices, connected with the general improvements in production, as to which I have already stated the reasons for not thinking the working of the gold standard to give grounds for serious complaint. The same trend of events may be expected as far in the future as we can make any sort of prevision. All the indications, so far as we can see, are that the advance in the arts will not relax, that commodities will be produced more and more cheaply and abundantly, that the general trend of prices in civilized countries will be downward, while money incomes will continue to be stationary or rising. The present monetary situation, and that for the visible future, seem to be on the whole satisfactory.

For this reason the schemes proposed by various eminent economists for a tabular or multiple standard of value, do not seem to me to be called for by any serious exigency not met by the maintenance of

the gold standard; apart from the fact that the habits of the people and the difficulties of securing accurate gauges of general changes in prices make these schemes in any case quite impracticable. The only contingencies with which the gold standard does not deal to reasonable satisfaction are those that may arise in connection with contracts running over very long periods of time. When a government incurs a huge national debt, with no expectation or intention of paying it for centuries to come; or when a railway company, to cite a recent case, issues bonds payable after the lapse of a hundred years,—chances are taken as to the economic developments of the future which must remain chances whatever the way in which the contract is framed, whether for payment in gold, or silver, or grain, or by a multiple standard. There is only one certain way of guarding against the difficulties that may arise from such contracts,—to make none of them.

Lastly, there is an objection to a change to a silver standard, or to any proposal of the sort, less tangible perhaps than those stated hitherto, yet more important and fundamental. It is an objection to the *morale* of the thing: to the disposition to tinker with the currency as a remedy for real or fancied evils. The present agitation in the United States for the use of silver is not the result of those considerations which have been discussed in this paper, and which have moved economists of eminence to advocate bimetallism. The reader may have been struck by the fact that the reasoning of the preceding pages touches only a small part of the ordinary arguments advanced in th.. coun-

try by the silver advocates. Most of their arguments are for an increase in the currency on general principles. These apply in favor of the issue of a flood of paper money as readily as they do in favor of the silver standard, and are mingled with schemes that can have no respectable backing, like that for government issues on the pledge of grain or land. Such reasons of real weight as may be advanced in favor of bimetallism are not to be rejected merely because they keep bad company. But the general character of the present silver agitation is certainly a strong argument against it. It is born of restlessness and ignorance. Whenever an era of real or apparent depression sets in, some portion of the community ascribes it to a single cause,—the tariff, the railways, the currency,—and looks for great things from the removal of that one cause. The most common panacea is the increase of the currency; and the silver agitation is only one form of the resort to this panacea. No lesson just now is more important for American democracy than that stability is the first quality needed in the medium of exchange, and that only harm can result from experimenting with it, and looking to changes in it for the cure of real or fancied evils.

V.—The Expansion of the Currency.

In conclusion, we may take up the question of the expansion of the currency of the United States, and the mode in which the circulating medium may best be made to accommodate itself to the growing wealth and transactions of the community. So far as the past is concerned, the evidence is ample that

the circulating medium has grown regularly and steadily, and has not left the people of the United States with any dearth of means for carrying on their exchanges. The circulating medium of a country like the United States consists of two different kinds. The one, which I have called large change, serves for every-day retail transactions; the other carries on the larger exchanges, chiefly of wholesale trade and production. We have seen, in the first part of this paper, how rapid and steady has been the increase in the supply of large change. Equally rapid, and even more striking has been the increase in the medium of exchange for large transactions. That medium, to repeat once more, is to be found in bank deposits, bank checks, and bank clearings. The volume of these has shown, year by year, a steady and rapid increase. Since 1878 the volume of individual deposits in national banks alone has more than doubled, rising from an average of six hundred and fifteen miilions in 1878 to an average of over fifteen hundred millions in 1890.[1] An increase at a rate even more rapid has

[1]The individual deposits in the national banks, on or about October 1, have been as follows since 1878:

1878	620.2	millions.
1879	719.7	"
1880	873.5	"
1881	1,071.0	"
1882	1,122.5	"
1883	1,049.4	"
1884	975.2	"
1885	1,102.4	"
1886	1,173.0	"
1887	1,249.5	"
1888	1,350.3	"
1889	1,475,5	"
1890	1,521.7	"

These are the figures as to the national banks only; to which must be added the deposits in state and private banks. For an estimate of the growth of deposits in all banking institutions, see the *Quarterly Journal of Economics*, vol. I, p. 408, and vol. V, p. 240.

taken place in the deposits in state banks and trust companies. These institutions, and especially the trust companies, play a much more important part in the mechanism of exchange now than they did in 1878; and their deposits in 1890 amounted to nearly nine hundred millions. The accurate figures which we are so fortunate as to possess in regard to the operations of the national banks show that this form of currency has accommodated itself closely to the growth of business transactions: rising rapidly from 1878 to 1882, slackening with the period of depression which was marked by the panic of 1884, and again rising regularly in the last five years. This part of the circulating medium, at any given time the most important and effective in the whole, will grow in the future as it has grown in the past; and in this direction we may be sure that there will be no failure of the medium of exchange to grow in response to increasing business transactions.

As a basis for deposit and check currency, a certain amount of cash must be kept in bank reserves. That cash in European countries consists mainly of gold; and since the resumption of specie payments,[1] it has been made up mainly of gold in the banks of the United States also. But it cannot be said that the world finds its supply of gold inadequate for this purpose. A comparatively small amount of gold suffices, and all the evidence goes to show that there has been no difficulty in securing enough. The holdings of gold in the reservoirs of the great banks, so far from declining, have shown a considerable

[1]Or rather, since the great inflow of gold into the United States in the years 1880–81, which was the main cause in bringing about the large holdings of gold by the banks of the United States.

increase; and that this increase has not been due to any struggle for gold, and has not been accompanied by any disturbing effects, is shown conclusively by the fact that the rate of discount has not been high and has not shown any unusual fluctuations.[1]

So far as that other part of the currency which I have called large change is concerned, it is true that the direct use of gold coin in all civilized countries, or even in the United States alone, would absorb more gold than the annual production could easily supply. The question is, what form of currency, resting on a gold basis, shall be used to supply that need? Ideally, the best currency of this sort consists of bank notes, issued under conditions insuring beyond doubt both ultimate payment and immediate redemption in specie. This form of large change adapts itself most readily and easily to the needs of the community, and offers least opportunity and temptation for issue to excess. Until within recent years it might have been expected that the United States would in the end look to the National Banking System for the supply of this sort of money. But the outlook now is that the national bank notes will be permitted to occupy the field only in very small part. The extent to which the silver issues have already gone, and the temper of the West and South, make it certain that for a long time to come

[1] I have stated my conclusions on this subject in general terms, it not being within the scope of the present paper to enter into the details of the complicated questions here touched on. Reference has already been made to Soetbeer's important "Materials on the Silver Question," where the facts up to 1885 are presented. An admirable discussion of the details of the subject is in two papers by the late Professor Nasse, in the "Jahrbücher für Nationaloekonomie," vol. 51 (1888).

resort will be made to government issues resting mainly on a silver basis.

The practical problem, then, is how best to make these issues in some sort elastic, and to prevent their being made in greater amounts than can be readily maintained equal in value to gold. The simplest and most promising plan for accomplishing these objects seems to me that proposed in 1887 by the then Secretary of the Treasury, Mr. C. S. Fairchild. His suggestion was made at the time when the act of 1878 was still in force, and when the silver issues were mainly in the form of silver certificates of the older sort; but the essential features of the scheme could be applied easily to the present Treasury notes, or indeed to any issues. Briefly, the scheme, as stated with reference to the act of 1878, was to do away with the mechanical limitation of the issues to the fixed amount of two and a half millions per month. Let the issues be subject to no other limit than that they should cease whenever the dead silver accumulated in the Treasury up to a certain amount. In other words, let the issues be in such amounts as would remain in steady circulation for actual use: those amounts being determined, as we have seen, by the occasion for the use of large change in the community. Whenever the back-flow of silver currency into the Treasury, and the consequent accumulation of dead silver, indicated that more was being put forth than the community would use, the issues should cease. The plan has the political and tactical advantage of offering on its face to give the people all the money they want and will use; a feature which makes it comparatively easy of attractive presentation in those parts of the country

in which any direct limitation of the currency is likely to be attacked as a machination of the creditor class. It ensures a reasonable degree of elasticity in the government issues. So long as the Treasury maintains a considerable reserve of gold, and the banks conduct their business with reserves and clearing-house payments based on gold, it offers little danger of depreciation or of a disturbance of the gold standard. No doubt it is open to the objection that the limitation may be done away with, and that any wave of unusual depression may lead to renewed agitation for the favorite panacea of more money. But this is the fundamental objection to all and any form of direct issue by governments of money resting on its credit; and it is one which the United States must face in any event. On the whole, Mr. Fairchild's plan seems to combine the greatest political advantages and the largest attainable security for a sound currency.

On the Shifting and Incidence of Taxation.

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BY

EDWIN R. A. SELIGMAN,

Professor of Political Economy and Finance, Columbia College.

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TABLE OF CONTENTS.

PAGE

INTRODUCTION 7

CHAPTER I.—HISTORY OF THE DOCTRINE OF INCIDENCE 11

I.—THE EARLY THEORIES 12

A.—Mun, Petty. B.—Decker, Massie. C.—Locke, Davenant, Asgill, Vanderlint, Cantillon. D.—Hume, Steuart.

II.—THE PHYSIOCRATIC THEORY 27

Quesnay, Mirabeau, De la Rivière.

III.—THE ABSOLUTE THEORY 29

Adam Smith, Ricardo.

IV.—THE DIFFUSION OR OPTIMISTIC THEORY 39

Verri, Canard, Courcelle-Seneuil, Cherbuliez, Prittwitz, De Broglie, Thiers, Stein, Mansfield, Martin, Gibbon, Wells, Sherman, Cooley.

V.—THE PESSIMISTIC THEORY 49

Proudhon, Bolles.

VI.—THE CAPITALIZATION OR AMORTIZATION THEORY 52

Craig, Sartorius, Hoffmann, Murhard, Passy, Wolowski, Destutt de Tracy, Du Puynode. Baxter, Noble, Rau, Schäffle, Pierson.

VII.—THE ECLECTIC THEORY 62

J. B. Say, Sismondi, Garnier, Parieu, Du Puynode, Vignes, Leroy-Beaulieu, Thünen, Rau, Hock, Prince-Smith, Jones, Buchanan, J. Mill, Senior, McCulloch, J. S. Mill, Fawcett, Cliffe-Leslie.

VIII.—THE AGNOSTIC THEORY 78

Held.

IX.—THE SOCIALISTIC THEORY 79

Lassalle.

X.—THE QUANTITATIVE OR MATHEMATICAL THEORY 80

Cournot, Fauveau, Jenkin, Pantaleoni, Walras, Marshall, Conigliani.

CHAPTER II.—INCIDENCE OF TAXES ON AGRICULTURAL LAND 87

I.—TAX ON ECONOMIC RENT 90

II.—UNIFORM TAX ACCORDING TO QUANTITY OR QUALITY 91

III.—Tax on Gross Produce 94
IV.—Tax on Agricultural Profits 95
V.—Tax on Property or Selling Value 95

CHAPTER III.—INCIDENCE OF TAXES ON URBAN REAL ESTATE 101
I.—Tax on Ground-Owner 105
II.—Tax on House-Owner 107
III.—Tax on Ground-Owner and House-Owner 114
IV.—Tax on Occupier 117

CHAPTER IV.—INCIDENCE OF TAXES ON PERSONAL PROPERTY, CAPITAL AND INTEREST. 129
I.—Equal Tax on all Capital 130
II.—Unequal Tax on Capital 133
a. Incidence as between original owner and new purchaser 134
b. Incidence as between lender and borrower... 135
c. Incidence as between producer and consumer. 139

CHAPTER V.—INCIDENCE OF TAXES ON PROFITS..... 140
I.—Tax on Gross Product or Gross Amount Sold... 147
II.—Tax varying with Gross Receipts 162
III.—Tax varying with Net Receipts 164
IV.—Tax of Fixed Amount 168
Application 170

CHAPTER VI.—INCIDENCE OF TAXES ON WAGES...... 172

CHAPTER VII.—INCIDENCE OF OTHER TAXES......... 177

CHAPTER VIII.—CONCLUSION 182

On the Shifting and Incidence of Taxation.

INTRODUCTION.

The problem of the incidence of taxation is one of the most neglected, as it is one of the most complicated, subjects in economic science. It has indeed been discussed by many writers; but its discussion in scientific literature, as well as in every-day life, has frequently been marked by what Parieu calls the "simplicity of ignorance". And yet no topic in public finance is more important. For in every system of taxation the cardinal point is its influence on the community. Without a correct analysis of its incidence, no proper opinion can be formed as to its justice or its actual effect. It is time for an attempt to be made not only to pass in review all the theories hitherto advanced, but to contribute to the solution of some of the theoretic problems while paying special attention to the practical aspects of the discussion.

A word first as to the terminology. In the process of taxing we must distinguish three conceptions. First, a tax is imposed on some person; secondly, it may be transferred by him to a second person; thirdly, it may be ultimately borne by this second person, or transferred to others by whom it is in last instance assumed. The person who pays the tax in first instance may thus not be the one who bears its burden

in last instance. This process of the transfer of the tax is known as the *shifting* of the tax, while the final burden on the ultimate tax-payer is called the *incidence* of the tax. The incidence of the tax is therefore the result of the shifting, and the real economic problem is the study of the shiftings.

The English language is unfortunately deficient in its nomenclature. While *incidence* conveys to the mind the notion of the ultimate result of the shifting, we have no word to express the immediate result of the original imposition of the tax. "Assessment" of the tax looks upon the process from above downward. We have no term to express the process from below upward. The French and the Italians have the words *percussion, percussione* to express this idea of the primary result of the assessment, and hence logically term the shifting of the tax the *repercussion*[1] of taxation, the ultimate result of which is the incidence (*incidence, incidenza*). But we in English must content ourselves with the awkward term "original incidence" while "incidence", when used alone, technically means the ultimate incidence or the result of the intermediate process. But the incidence or the result must never be confounded, as is so often the case, with the shifting or the process.

Again, the shifting of the tax must not be confounded with what is known as the evasion or escape of the tax. Shifting is the non-payment of the tax through the transfer to some one else; evasion is the non-payment of the tax without any transfer. A tax may be thrown off entirely without being

[1]They also use the words *translation, traslazione*, which are the same as our "transference"=shifting. The French also speak of taxes being "rejetés"—our "thrown off" or "shifted".

shifted to anyone. Evasion may be either legitimate or illegitimate, conscious or unconscious. For instance, through smuggling we have an illegitimate evasion, but no shifting, of the tax. On the other hand, when a new tax is a partial cause of improved processes of production, as e. g. the beet-sugar tax in Europe, or the whisky tax in America at one time, the producer evades the tax to a certain extent, but does not shift it. This is the case of a legitimate evasion. Finally, when the process of capitalization of incidence takes place—a process that will be fully explained later, but whose main features may be said to consist in the fact that the purchaser of a taxable object under certain circumstances discounts the tax which he will have to pay in the diminution of the purchase price—,there is practically an evasion of taxation, but no shifting. In this case the evasion is unconscious; in both the preceding cases the evasion was the result of a conscious effort. The distinction between evasion and shifting has puzzled many writers. We shall have occasion to revert to it constantly.

The Germans have devised a very elaborate nomenclature to distinguish the various kinds of shifting, as e. g. whether a tax is shifted forwards from the producer on to the consumer, or back from the consumer to the producer, or further on from one consumer to another.[1] But this nomenclature is utterly impossible in English, and is moreover of not much importance, especially as scarcely any two writers use the terms in precisely the same way, and as the

[1]The German terms are *Abwälzung*, *Fortwälzung*, *Rückwälzung*, *Weiterwälzung*, and the general term *Ueberwälzung*. Their *Abwälzung* is nothing but our "evasion", and not a form of shifting at all. Some few writers, however, like Roscher, use "Abwälzung" to denote shifting in general. There is no unanimity in the usage.

would-be fine distinctions have only served to bring about a confusion between evasion and shifting.

Finally, we must not confound the incidence of taxation with the effect of taxation. A tax may have a great many effects. It may diminish industry and impoverish individuals; it may in some cases stimulate production and enrich individuals; it may be an unmitigated curse to society; it may be a necessary evil; it may be an unqualified boon to the community regarded as a whole. With none of these problems does the study of incidence busy itself. All that we have to investigate is: On whom does the tax ultimately fall? When we once know this we can then proceed to the further discussion of the effects produced on the various classes or individuals by the pressure of taxation. The problem of incidence concerns itself simply with the one question of fact,—who really pays the tax? It does not pretend to unravel the final consequences of taxation. The shifting is the process; the incidence is the result; the changes in the distribution of wealth are the effect.

The discussion of incidence thus depends entirely on the investigation of the shiftings of taxation. The real problem before us is to ascertain the condition according to which a tax is shifted onwards, backwards or not at all. Only when we understand why and how a tax is shifted, can we discover its actual incidence.

In the following pages an attempt will be made to attack the problem first by giving a detailed history of the doctrine, secondly by taking up the chief separate taxes one by one, and finally by drawing the general conclusions applicable to the science of public finance.

CHAPTER I.

THE HISTORY OF THE DOCTRINE OF INCIDENCE.

Although it is not always possible to draw the line sharply between various schools of writers, we may, nevertheless, assert that there have been no less than ten different theories of the incidence of taxation.[1] These are what may be called:

I.—The Early theories.
II.—The Physiocratic theory.
III.—The Absolute theory.
IV.—The Diffusion or Optimistic theory.
V.—The Pessimistic theory.
VI.—The Capitalization or Amortization theory.
VII.—The Eclectic theory.
VIII.—The Agnostic theory.
IX.—The Socialistic theory.
X.—The Quantitative or Mathematical theory.

[1]The only works which contain a history of the theory of incidence are the German works of J. Kaizl, "Die Lehre von der Ueberwälzung der Steuern", 1882, and G. v. Falck, "Kritische Rückblicke auf die Entwickelung der Lehre von der Steuerüberwälzung seit Adam Smith", 1882. Both these works are very inadequate, although Kaizl's is by all means the better. Whole classes of authors are omitted, among them some of the most important. Both works are chronological and make almost no attempt to analyze the theories according to schools. Falck's book is richer in the account of the earlier German writers. Kaizl is better acquainted with several of the French writers, but omits some of the most noteworthy. Both writers almost entirely neglect the English authors except Smith, Ricardo and Mill, and utterly ignore the Italian, Spanish and American writers on the topic. Falck is almost without any positive constructive ideas at all, while Kaizl is such a slavish adherent of one or two German predecessors that his own constructive work is very insignificant. But both books are nevertheless to be recommended as the most valuable that we possess on the history of the doctrine.

I.—The Early Theories.

The English writers on public finance during the seventeenth and eighteenth centuries prior to Adam Smith, may be divided into four classes, in so far as the practical inferences from the doctrine of incidence of taxation are concerned:

A.—Those who favor a general excise.
B.—Those who favor a single tax on houses.
C.—Those who favor a single tax on land.
D.—Those who favor a more eclectic system.

A.—*Those who favor a general excise.*

The project of a general tax on consumption was a favorite one with many of the early writers. It gradually met with both adherents and opponents until under Walpole it became the subject of a fierce controversy. We are here concerned not so much with the project itself as with the theory of incidence on which it was based.[1]

The earliest writers to propose a system of excises did so because they thought that an excise would simply be shifted to the consumers and remain on them. Since their ideal was a tax on expense, the ideal would be best attained by a general excise. The first writer to posit expenditure as the basis of

[1]Those who care to go into the literary history of the controversy are referred to the excellent monographs of Leser, "Ein Accisestreit in England, Heidelberg", 1879; and of Ricca-Salerno, "Le dottrine finanziarie in Inghilterra tra la fine del secolo XVII e la prima metà del XVIII", Bologna, 1888. In addition to the pamphlets there discussed, a list of other contemporary pamphlets may be found in the bibliography printed by Sinclair "History of the Public Revenue of the British Empire", 3rd ed. 1804, Vol. III, app. 94-136.

taxation was Hobbes.[1] And the general idea is well expressed in the statement of Cradock, that "the Generall Excise (so much decryed and Petitioned against) in its proper Constitution, is the most equitable of Impositions, no man being charged with it, but he who sells for profit, to the consumption of the Commodity, who in truth pays it insensibly without Complaint."[2]

Other writers, however, took a little different view of the incidence of such taxes. And among them perhaps the first economist to treat the question was the famous advocate of the Mercantile theories, Thomas Mun.

Mun discusses the tax systems of Italy and Holland, and finds their essence to consist in "customs on wares transported, customs upon every alienation or sale of live Cattel, Lands, Houses and the portion or marriage money of women, licence money upon all Victualling houses and Innkeepers, head money, Custom upon all the Corn, Wine, Oyl, Salt and the like, which grow and are consumed in their own dominions." Now these all seem to be "a rabble of oppressions to make the people poor and miserable."[3] But Mun declares this to be a mistake. For in proportion as the necessaries of life increase in price, the rate of wages must also rise. In the long run, therefore, the taxes on the poor will be shifted to the

[1] Hobbes, "The Leviathan", chap. 30, part 2, p. 181 of the 1651 edition. (Reprint of 1881, p. 270).

[2] Francis Cradock, "An Expedient for Regulating the Customes and Excise, Approved by Divers well affected Marchants and others of the City of London", 1659, page 1.

[3] Thomas Mun, "England's Treasure by Forraign Trade, or the Ballance of our Forraign Trade is the Rule of our Treasure", 1664, Chap. xvi: "How the revenues and incomes of princes may justly be raised".

employers and the rich.[1] And this is a good thing because the rich will thus be "forced to abate their sinful excess and idle retainers."[2] Mun's idea, it is plain, is that taxes on consumption are to be commended because they will be shifted to the employing producer.

A far fuller theory of incidence is found in the first English book devoted entirely to taxation, a work written by Sir William Petty. Petty first discusses the procuring of revenue from land, which he says can be done in two ways: either by "setting apart a proportion of the whole Territory for Publick Uses", or by "an excision of the land by way of assessment or land taxe." Such a land tax, where an "aliquot part of every Landlord's Rent were excinded or retrenched" is good in a new country, where a certain quit-rent is reserved beforehand, because it will be borne partly by the landlord but partly by the consumers. For "it is not only the Landlord pays but every man who eats but an Egg, or an Onion of the growth of his Lands; or who useth the help of any Artisan, which feedeth on the same."[3] In old countries like England, where rents are fixed for a long time, such a tax would be unjust because it would benefit only the landlords who renew their rents. These gain doubly, "one way by the raising

[1] "Neither are these heavy Contributions so hurtful to the happiness of the people, as they are commonly esteemed: for as the food and rayment of the poor is made dear by Excise, so doth the price of their labour rise in proportion; whereby the burden (if any be) is still upon the rich, who are either idle, or at least work not in this kind, yet have they the use and are the great consumers of the poors labour". *Ibid.* p. 154.

[2] *Ibid.* p. 155.

[3] Petty, "A Discourse of Taxes and Contributions", 1677, Chap. iv I quote from the edition of 1691, page 20.

of their Revenues, and the other by enhansing the prices of provisions upon them." For the tax "doth ultimately light upon the consumptioners," or as he again puts it a "Land-tax resolves into an irregular Excize upon Consumptions, that those bear it most, who least complain."[1]

Petty also discusses the house tax or "an Excisium out of the Rent of Housing." He deems the influence of this much more uncertain than that of land, "for an house is of double nature, viz.: one, wherein it is a way and means of expence: the other, as 'tis an Instrument and Tool of gain. . . . . Now the way of a Land-tax rates housing, as of the latter nature, but the Excize as of the former."[2] From which it may be inferred that Petty thinks a house-tax will be shifted to the consumer or occupier, and will be shifted further on to other consumers when the occupier is himself a producer.

In regard to "customs," both "outwards" and "inwards", Petty assumes that they will be shifted to the consumers, and concerns himself only with stating the principles on which they should be levied.[3] Poll-money, he thinks, cannot be shifted: and he opposes the tax because it is very unequal.[4] He concludes that a general excize on consumptions is the best of all taxes, assuming that it cannot be shifted any further. For land and house taxes are only partially shifted. This is not the place to discuss

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[1] *Ibid.* page 21.

[2] *Ibid.* page 21.

[3] *Ibid.* pp. 34-40.

[4] Petty grows very indignant over the English system: "so as by this confusion, arbitraries, irregularities and hotch pot of qualifications, no estimate could be made of the fitness of the plaister to the sore". *Ibid.* p. 41.

Petty's many reasons for favoring a tax on expense.[1] For our purposes it is sufficient to state that, starting out from the principle that a tax on expenditure is the ideal tax, he favors the general excise as attaining this result most speedily and most certainly.

The views of Petty gradually diffused themselves throughout the community until the English system of taxation became largely one of indirect taxes upon consumption. Mun's theory, that in so far as taxes on consumption were taxes on the necessaries of life of the laborers they would be shifted to the employers, was now abandoned, and the excise was upheld just because it fell upon the consumer. It was now imagined that taxes on the necessaries of life would form the greatest stimulus to an improvement in the conditions of labor, in sobriety and care and efficiency. A tax on labor would thus be a real spur to industry and commerce. This idea is found in many writers and was most strongly expressed later on in an essay by Temple, who maintains that "the only way to make the poor temperate and industrious, is to lay them under a necessity of laboring all the time they can spare from meals and sleep, in order to procure the common necessaries of life."[2]

B.—*Those who favor a single tax on houses.*

The views of Petty and his school on the incidence of the excise met with considerable opposition on the

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[1] They may be found in Chap. xv, pp. 68-72.

[2] [William Temple.] "A Vindication of Commerce and the Arts". By I. B. 1758. In Lord Overstone's "Select Collection of Scarce and Valuable Tracts on Commerce", (1859) p. 534.. . . . . . . McCulloch in his "Literature of Political Economy," 332, quotes an anonymous pamphlet especially devoted to this subject: "Considerations on Taxes, as they are supposed to affect the price of Labour in our Manufactures", etc., 1765. See esp. pp. 29-31.

part of those who, without knowing it, again reverted in some degree to the theory of Mun. The opponents of the general excise now denied that the tax would prove a spur to industry. They maintained, on the contrary, that the tax would be shifted from the producing consumer to the producing employer and that a general excise would hence be a serious drag on all production and industry; and they therefore proposed, instead of a general excise, a single tax on houses. The chief advocate of this theory was Sir Matthew Decker.

Decker, it is true, also calls his scheme one for a "general excise", but goes on to explain that he means only a "single excise duty upon houses".[1] He discusses its benefits at great length and finds its chief merits to lie in the fact that "it would prevent all Manner of Running and hinder the Ruin of many Thousands of poor unhappy Creatures, which have been or are still employed in the Smuggling Trade"; that "it would set the Merchant and Shopkeeper free from a multitude of false and vexatious or frivolous Informations, which may now be lodged against them". But above all he advocates the plan because it would enable "the Merchant as well as the Shop and Warehouse keeper to trade with half the stock and make his Profit the same or rather increase it."[2]

Everywhere we find the emphasis put on the interests of production and trade because of the opinion

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[1] "Serious Considerations on the several High Duties which the Nation in general (as well as its Trade in particular) labours under: with a Proposal for preventing the Running of Goods, discharging the Trader from any search, and raising all the Publick Supplies by one Single Tax. By a Well-Wisher to the Good People of Great Britain". [Sir Matthew Decker.] London, 1743, p. 15.

[2] *Ibid.* p. 24.

part that in the long run the incidence of the existing taxes is upon them. In fact Decker wishes to have the houses "of the lowest and poorest Sort of People" exempt from the tax on the express ground that "thereby their labour might become so much the cheaper."[1] And Decker closes his exposition with the hope that it may be said of England, as formerly of Tyre, "that their Merchants are Princes and their Traffickers the Honourable of the Earth".[2]

Decker's project was greeted by a number of writers, but soon met with determined opponents of whom the most prominent was Massie. Massie specified all manner of objections to the scheme, into which it is not necessary to enter here. In so far as the doctrine of incidence is concerned, he simply reverted to the old theory that "the taxes of this kingdom are so wisely laid as to encourage Industry, and good Husbandry, by discouraging their Opposites."

C.—*Those who favor a single tax on land.*

The theory that all taxes are finally shifted to the land-owner is commonly ascribed to the French Physiocrats. Yet the same theory was expounded in England long before the Physiocrats, although only in part for the same reasons. The first inkling of the doctrine is found in a writer of a celebrated seventeenth century tract, who

[1] *Ibid.* p. 16.

[2] *Ibid.* p. 32.

[3] "The Proposal commonly called Sir Mathew Decker's scheme for one general tax upon Houses laid open and shewed to be a deep concerted Project to traduce the Wisdom of the Legislature; disquiet the Minds of the people: and ruin the Trade and Manufacturies of Great Britain". [By Joseph Massie.] London, 1757, esp. p. 68.

contends that the landowners "bear all the Taxes and publick burthens: which in truth are onely born by those who buy and sell not: all sellers raising the price of their commodities, or abating of their goodness, according to their taxes".[1]

This theory of incidence was, however, worked out much more fully by John Locke.

Locke lays down his general thesis in the words: "Taxes however contrived, and out of whose hands soever immediately taken, do, in a country, where the great fund is in land, for the most part terminate upon land".[2] To prove this Locke first attempts to show that a tax levied on the landowner cannot be shifted. If the "country gentleman" actually pays the tax out of his pocket he certainly feels its burden. But "this influences not at all the yearly rent of the land, which the rackrenter or under tenant pays: it being the same thing to him, whether he pays all the rent to the king or to the landlord." For the "tenant's bargain and profit are the same, whether the land be charged, or not charged, with an annuity payable to another man". The landowner, in other words, cannot shift a land tax.

But how is it if taxes are levied not on land but on commodities? A tax on commodities, says Locke, must raise the price of the commodities to the consumer. "Let us see now who, at long run, must pay

[1] "Reasons for a Limited Exportation of Wooll", 1677, p. 5. The author also states that the landowners "are Masters and Proprietaries of the foundation of all the wealth in this Nation, all profit arising out of the Ground, which is theirs". Therefore it is much more to the interest of the nation to "preserve the Nobility and the Gentry, than a few Artificers or the Merchants".

[2] John Locke, "Some considerations of the Consequence of lowering the Interest, and raising the Value of Money", 1691. In "Collected Works", 12th edition, 1824, Vol. IV, p. 55.

this and where it will light". The merchant and broker will not pay it, for "if he pays more for commodities than he did, he will sell them at a price proportionably raised". On the other hand the "poor labourer and handicraftsman cannot pay the tax, for he just lives from hand to mouth already". The consequence of a tax on the laborer will be either that "his wages must rise with the price of things to make him live; or else not being able to maintain himself and family by his labour, he comes to the parish; and then the land bears the burthen a heavier way". But if the laborer's wages rise, the farmer must pay more for wages as he does for other things, "whilst he sells his corn and wool, either at the same rate or lower, at the market (since the tax laid upon it makes people less forward to buy.) . . . . So the yearly value of the land is brought down. And who then pays the tax at the year's end but the landlord"?[1]

A tax on commodities imported will always be shifted from the merchant to the consumer, and in fact the importer will generally expect a profit and "raise his price above what his taxes comes to". For "you must not think that the raising their price will lessen the vent of fashionable, foreign commodities amongst you". But with the produce of the land it is different. "Your landholder being forced to bring his commodities to market, such as his land and industry afford him, common and known things, he must sell them there at such price as he can get". When a tax on land is laid on these "homebred commodities", which are seldom "the favorites of your people", every one will make as sparing a use of them as possible, prices will fall and rents will decrease.

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[1] *Ibid.* p. 58.

Hence Locke concludes in the famous passage: "It is in vain, in a country whose great fund is land, to hope to lay the public charge of the government on anything else; there at last it will terminate. The merchant (do what you can) will not bear it, the labourer cannot, and therefore the landowner must; and whether it were best to do it, by laying it directly where it will at last settle, or by letting it come to him by the sinking of his rents, which when they are once fallen, every one knows are not easily raised again, let him consider".[1]

Locke's theory was accepted by the renowned financier Davenant, who maintained that "all taxes whatsoever are in their last resort a charge upon land".[2] So also Asgill[3] and Cantillon[4] were worthy forerunners of the Physiocrats in so far as they asserted that land was the real foundation of all wealth, and thus ultimately bore the weight of all taxes. But after Locke the theory was most fully explained by Vanderlint.

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[1] *Ibid.* p. 60.

[2] Davenant, "An essay upon Ways and Means", 1695. In "Collected Works", edited by Whitworth, p. 77.

[3] Asgill, "Several Assertions Proved in order to Create another Species of Money than Gold or Silver", 1696, esp. p. 20: "Man deals in nothing but earth; the merchants are the factors of the world to exchange one parte of the earth for another. The king himself is fed by the labour of the ox and the cloathing of the army and the victualing of the navy, must all be paid for to the owner of the soil as the ultimate receiver, and whatever the ultimate receiver will demand or accept must be a rule for the intermediate receivers to govern themselves by".

[4] Cantillon, "Essai sur la Nature du Commerce en Général", 1755. (Translation of the English work written before 1734 but not published) See esp. Chap. xii: "Tous les Ordres et tous les Hommes d'un Etat subsistent ou s'enrichissent aux dépens des Propriétaires des Terres".

Vanderlint maintains that if all the then existing taxes were suddenly repealed, prices of commodities would either remain the same or change. If they remained the same, supposing that there had been no change in the quantity of the money supply, the cost of production would decrease because of the abolition of the tax on producers. The difference between cost and price, however, is rent. Hence the only result would be to increase the rent of the landowner. On the other hand if prices were to fall, low prices would cause an expansion of the demand. But since all commodities in last resort come from the land, increased demand means increased rent. Thus from either point of view remission of taxes enures to the welfare of the landlord. Or, in other words, the incidence of all taxes is on the land. Hence Vanderlint proposes a single tax on land, as far cheaper and better than the existing complicated and inconvenient system of taxes, which after all in last resort fall on the land.[1]

D.—*Those who favor a more eclectic system.*

The single tax idea soon met with considerable opposition. The anonymous author of a widely read monograph maintains that "Mr. Locke's position, taken in its full extent and without any limitations is greatly controvertible," and "that the maxim seems

[1]Jacob Vanderlint, "Money answers all Things: or an Essay to make Money sufficiently Plentiful amongst all Ranks of the People and Increase our Foreign and Domestic trade, etc." 1734.—Asgill and Vanderlint were first quoted by Dugald Stewart in his appendix to the Life of Adam Smith, and in his Lectures on Political Economy delivered in 1800–1809, but first published in 1877, Vol. II, 239 Kautz, "Die geschichtliche Entwicklung der National-ökonomik und ihrer Literatur" 1860, 320–322 also refers to them.

to go farther than reason and experience will warrant."[1] He does not object to the statement that a tax laid upon farmers' produce "makes people less forward to buy"; but he does not see "why that reason should not have the same operation upon other commodities." The demand for commodities, he thinks, depends "on the quantity of money subsisting in the market"; and if this quantity is unchanged, an increased tax on the general trader must diminish mercantile profits.[2] The same argument which goes to prove that a land tax cannot be shifted also proves that a tax on traders' profits can not be shifted. But our author makes one notable exception, and maintains that it is useless to try to tax "moneyed men" on their personal property. For taxes on mortgages or on the public funds would be shifted to the mortgageor or the public respectively through a corresponding increase in the rate of interest.[3] Finally he objects to any further increase in the excise taxes "for one thing is certain, that no good can be produced by taxes upon commodities. They may starve the industrious, but they never will induce the idle and extravagant to labour and to

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[1] "Considerations upon a Reduction of the Land Tax", 1749, pp. 15–19. I have never seen this work referred to by any modern writer.

[2] "And if additional taxes be laid, while the money, with which commodities are to be purchased, remains unincreased, the trader must be contented with smaller gains, or not trade at all. And the first part of the alternative will always be the case where the profits of a flourishing trade may well support some diminution". *Ibid.* p. 14.

[3] "Were mortgages or the funds to be taxed, matters would not be mended. For, as taxes, wherever placed, can have no tendency to lower the interest of money; they, who buy into the funds, would buy so much cheaper as the tax would amount to, and the lender upon mortgages insist upon a higher rate of interest". *Ibid.* p. 25.

save for the benefit of the landlord".[1] And, therefore, while not an advocate of any single tax on land, the author objects to any decrease in the land tax which would involve a further increase in the taxes on trade and commodities.

The general doubt as to the value of Locke's theory is seen in a number of other works. Postlethwayt, one of the prominent writers, refers to the opposition although he does not attempt to give his reasons.[2] But the most famous opponents were the two chief economists of the third quarter of the eighteenth century, Hume and Steuart.

Hume passes over the theory of incidence with a very few words. He discusses Locke's doctrine, and opposes it strongly on the ground that while every one tries to shift a tax to some one else, no one set of men can ever entirely succeed.[3] Hume's theory, in short, results simply in the very vague conclusion that not every one is able to shift all taxes.

The fullest discussion of the incidence of taxation before Adam Smith is to be found in the works of Sir James Steuart. Steuart divides all taxes into three kinds, proportional, cumulative and personal. Proportional taxes are those which fall upon expense

[1] *Ibid.* p. 17.

[2] Malachy Postlethwayt, "Great Britain's True System, etc.," 1757, p. 306: "If Mr. Locke's observation that all taxes in general ultimately terminating upon landed (*sic*), should be exceptionable, as some think it, yet", *etc.*, *etc.*

[3] "Every man, to be sure, is desirous of pushing off from himself the burthen of any tax which is impos'd, and laying it upon others. But as every man has the same inclination, and is upon the defensive, no set of men can be suppos'd to prevail altogether in this contest. And why the landed gentlemen shou'd be the victim of the whole, and shou'd not be able to defend himself, as well as others are, I cannot readily imagine." Hume, "Political Discourses." Discourse viii, Of Taxes, page 121 of the ed. of 1752.

(what we would call indirect taxes); cumulative or arbitrary taxes are those which affect property; and personal taxes are those which consist in personal service. Proportional taxes are always "drawn back" (i. e. shifted) by the industrious consumer. That is, Steuart thinks that in so far as a consumer purchases anything else he is an industrious consumer, except in so far as the "consumption made by the latter is an article of superfluity". In other words, taxes on the necessaries of life are shifted from wage-earner to the employer because the wage-earner is a "physical necessarian" who accumulates no profits.[1] But if he spends his money on taxable articles which other members of his class do not use, he cannot shift the tax. "A tanner sells his leather to a shoemaker; the shoemaker, in paying the tanner for his leather, pays the tanner's subsistence and profit, and the tax upon leather. A man who buys shoes of the shoemaker refunds all this to the shoemaker together with his subsistence, profit and the tax upon the shoes; consequently the price of shoes are (*sic*) raised, only by refunding the taxes paid by the industrious. But if the shoemaker's subsistence should happen to include either tavern expenses or his consumption on idle days, he will not draw these back: because other shoemakers who do not frequent the tavern and who are not idle will undersell him". All proportional taxes therefore in last resort fall upon "the rich and idle consumer of the manufacture, who can draw nothing back from anybody. The whole reimbursement of all former payments and repayments comes upon him". Hence Steuart concludes that it is absurd to

[1]Steuart, "An Inquiry into the Principles of Political Economy," 1767, Book V., Chap. iii. In Collected, Ed. of 1805, IV, 185.

say that all taxes ultimately fall upon land, or upon trade. "Proportional taxes never can fall either upon, or affect any person but the idle, that is to say the non-industrious consumer."[1]

With regard to what he calls cumulative taxes Steuart lays down the general rule that "the nature of all these taxes is to affect the possessions, income and profits of every individual, without putting it in their power to draw them back in any way whatever; consequently such taxes tend very little towards enhancing the price of commodities."[2] Such taxes ought therefore generally to be dispensed with. Taxes on land, he thinks, do not augment the price of wheat as they raise the price of excisable goods, because if the proprietor were to attempt to raise the price of his grain in proportion to the tax, his farmer who pays no land tax would undersell him.[3] All attempts to levy a tax on money, however, will be unsuccessful, while a tax on trade profits, although it would tend to rest on profits, is not to be recommended, because, "although they appear to be income, I rather consider them as stock, which ought not to be taxed".[4] Steuart's final conclusion is expressed in these words: "I conclude that no objection can lie against proportional taxes so far as they affect the industrious, because they draw them completely back: and that great objections lie against cumulative taxes, when they affect the industrious, because they cannot draw them back at all: and consequently they may affect the physical-necessary of the contributor, in case no profit should remain to him upon

[1] *Ibid.* p. 189; *Cf.* p. 209.
[2] *Ibid.* p. 191.
[3] *Ibid.* p. 255.
[4] *Ibid.* p. 250.

his labor. On the other hand I think little objection can be made to cumulative taxes, when they are imposed upon possessions, which produce a visible annual revenue clear to the proprietors."[1]

It is clear, therefore, that by the third quarter of the eighteenth century the economists, although differing among themselves were united in opposing Locke's theory of the shifting of all taxes to land. It is no wonder that Dugald Stewart wrote a few decades later, in reference to the single tax idea: "I shall only remark that the first idea of it was borrowed from this country, where it has been repeatedly suggested by authors of reputation, although it had been almost forgotten as an exploded chimera, when it was revived by the Economists of France.[2]

II. The Physiocratic Theory.

The Physiocratic theory of incidence was outlined by the founder of the sect, Quesnay; it was developed in 1760 by Mirabeau in his *Théorie de l'Impôt;* it was discussed from all sides by Mercier de la Rivière in 1767; and it was finally completed by various works of Turgot, above all in his memoir written for Benjamin Franklin to prevent the adoption of any but the single tax by the nascent government of the United States. The theory may be summed up as follows:

Agriculture is the sole source of wealth. It is the only productive employment because it alone furnishes a *produit net* or surplus above the necessary

[1] *Ibid.* p. 221.

[2] Dugald Stewart. "Lectures on Political Economy, Now First Published", 1877, II, 238.

expenses of production. All other occupations are utterly unproductive or "sterile." Industry and commerce may be useful and even necessary to a community, but they are economically unproductive because they do not create new wealth, but simply transform existing wealth. They may increase values, but the increase of value must be exactly equivalent to the labor expended; and the value of this labor again is in last resort dependent on the value of the food or objects furnished by the agricultural class. Since, therefore, the "net product" of agriculture is the sole fund or source of wealth, all taxes, however levied, must ultimately be paid from this fund. And therefore it is much better to assess this fund *directly* by a land tax, than to assess it *indirectly* by any other tax, for in this way you save expense and trouble. But whether you levy direct or so-called indirect taxes, the incidence is always on the land.[1]

[1] The chief passages are Quesnay, "Maximes Générales du Gouvernement," V: "Que l'impôt soit établi immédiatement sur le produit net des biens fonds"; Second Problème économique: "Du quelque façon qu'on s'arrange, les propriétaires de la terre payent inévitablement la totalité de l'imposition indirecte" (Daire's edition of the Physiocrats, pp. 83, 134); Mirabeau, "Théorie de l'Impôt," 150: "L'impôt doit etre établi immédiatement sur la réproduction annuelle"; Mercier de la Rivière, "L'Ordre Naturel des Sociétés Politiques," Chap. IV: "La forme essentielle de l'impôt consiste à prendre directement l'impôt où il est et à ne pas vouloir le prendre où il n'est pas . . . Les fonds qui appartiennent a l'impôt ne peuvent se trouver que dans les mains des propriétaires foncières. L'impôt doit être pris sur les produits nets des terres, et demandé par conséquent à ceux qui sont possesseurs de ces produits . . . Changer cette forme directe de l'établissement de l'impôt pour lui donner une forme indirecte, c'est renverser un ordre naturel. . . . Le nom impôt indirect annonce qu'il n'est point supporté par ceux sur lesquels il semble être directement établi; lors même qu'il parait totalement étranger aux propriétaires fonciers, il retombe sur eux,

An eminent French writer, M. Leroy-Beaulieu, has fallen into a curious error. The Physiocrats, according to him, held that even if the single tax were imposed the landowners would lose nothing because their products would rise in price, and thus reimburse the proprietors for their outlay.[1] This is absolutely erroneous. The cardinal doctrine of the Physiocrats was that all taxes fell ultimately on the landowners, and on them alone. It was just because they supposed the tax could not be shifted that they advocated the single tax.[2]

III.—The Absolute Theory.

A celebrated group of writers on incidence of taxation hold to what we may call the absolute theory of incidence. Foremost among these is Ricardo. Ricardo's Principles of Taxation consists almost exclusively of an investigation into the question of incidence. It discloses here the same merits and the same defects which are so characteristic of all his work. On the one hand profound and acute analysis, with a

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et à grands frais, (Daire's ed. pp. 474, 476, 480); Turgot, "Mémoire" [written for Franklin] "Aucune forme ne peut empêcher le poids de l'impôt de retomber en totalité sur les propriétaires des terres". "Oeuvres" (Daire's ed.) I, 412.

[1] Leroy-Beaulieu, "Science des Finances," 3rd ed., I (1883), 199.

[2] "Tout impôt est payé par le produit des terres, tout ce que l'impôt prend sur ce produit, après le partage fait par le souverain, forme un double emploi; tout double emploi retombe sur les propriétaires fonciers". Mercier de la Rivière, "L'Ordre Naturelle," etc. Chap. vii. (p. 504 of Daire's edition.) *Cf.* Turgot, "Explications sur l'effet de l'impôt indirect": "Tous les impôts sous quelque forme qu'ils soient perçus retombent nécessairement à la charge des propriétaires des biens fonds, et sont toujours en dernière analyse payés par eux seuls, ou directement, ou indirectement. "Oeuvres" (Daire's ed.) I, 416.

marvellous power of isolating the phenomena and treating them as unaffected by disturbing causes; on the other hand the implication that the hypothetical case is a real case, the inference that the formulae deduced with mathematical accuracy and logical rigor from the assumed premises represent the actual economic facts ;—this constitutes at once the strength and the weakness of the Ricardian theories. In order, however, to understand Ricardo, it will be necessary to say a word about Adam Smith.

Adam Smith bases his investigation on the division of all revenue into rent, profits and wages. All taxes on land, whether proportional to the rent or to the produce, are declared to be in reality taxes on rent. And although they may be originally advanced by the tenant, they are always finally paid by the landlord. A tax on land rent always falls on the owner, for the "farmer computes, as well as he can, what the value of the [tax] is, one year with another, likely to amount to, and he makes a proportionable abatement in the rent which he agrees to pay to the landlord." The farmer must have his reasonable profit as well as every other dealer. Hence "the more he is obliged to pay in the way of tax, the less he can afford to pay in the way of rent."[1] The case of a tax on house-rent is slightly different, because house rent is really distinguishable into two separate ingredients, building rent and ground rent. The tax on ground rent, like that on the rent of land, will inevitably fall on the owner, because "the more the inhabitant was obliged to pay for the tax, the less he would incline to pay for the ground."[2] But that part of the rent

[1] "Wealth of Nations." Book V, Chap. ii. Rogers' ed. II, 417, 428.
[2] *Ibid.* II, 437, 450.

which represents the building rent is simply the profits of the capital expended in building the house. And this part will necessarily fall on the occupier because unless the builder secures the same return on his capital as other business men do, he will cease building houses until the increased demand for houses again raises the rent,—that is, in this case, his profits,—to the general level. A tax on house rent will therefore fall partly on the owner, partly on the occupier, but "in what proportion this final payment would be divided between them, it is not perhaps very easy to ascertain."[1]

Taxes on profits are simple of analysis. The profit arising from stock is divided by Smith into two parts, that which pays the interest, and the surplus over and above the interest. A tax on the surplus above interest is always shifted, because this surplus is the "compensation for the risk and trouble of employing the stock", which the employer must have if he desires to continue the employment. And it will be shifted either on the landowner or on the consumer, according as the stock is employed in farming or in mercantile business.[2] For if he employed it as "farming stock" he could raise the rate of his profit only by reducing the amount he is called upon to pay to the landlord, that is, the rent. But if he employed it as a "mercantile or manufacturing stock", he could raise the rate of his profit only by raising the price of his goods.

A tax on interest—that is on what Smith regards as "the net produce which remains after completely compensating the whole risk and trouble of employ-

[1] *Ibid.* II, 434.
[2] *Ibid.* II, 440.

ing the stock"—seems to fall entirely on the owner, just as in the case of a tax on rent. But in reality the interest on money is a much less proper subject of direct taxation than rent, because land is tangible and easily ascertainable while capital stock is not; and because land cannot be removed while stock easily may. To tax stock, therefore, would cause its removal from the country, and put an end to all the industry which it had maintained, and thus reduce not only the profits of stock, but also the rent of land and the wages of labor. A general tax on profits hence affects other classes besides the employer.[1] A tax on the profits of stock employed in any particular branch of trade will, however, always be shifted from the dealers to the consumers because the dealers must "in all ordinary cases have their reasonable profit." The consumers will have to pay in the enhanced price of their goods not only the tax advanced by the dealer, but generally some overcharge in addition.[2]

Taxes on wages, finally, are always shifted. This is due to the fact that the rate of wages is necessarily regulated by the demand for labor and the average price of food. When these remain the same a direct tax on wages "can have no other effect than to raise them somewhat higher than the tax." If the laborers were engaged in "manufacting labor," the employer would have to raise wages, but would be obliged to charge it ultimately with a profit on the consumers. If the laborers were engaged in husbandry, the farmer would in the long run pay less rent to the landlord.

[1] *Ibid.* II, 443: "The proprietor of stock is properly a citizen of the world and is not necessarily attached to any particular country."
[2] *Ibid.* II, 446.

But both the reduction of the rent and the rise of price will be greater than the amount of the tax.[1] Whenever taxes on labor have not produced a proportionate rise of wages, it is because they have led to a fall in the demand for labor. But the only results of this have been a "declension of industry, a decrease of employment, and a diminution of the annual produce of the land and labor of the country." Even then, however, wages must always be higher than they would otherwise have been,—and this increase of price must be finally paid by the consumers. The same argument holds good of the "recompense of ingenious artists and of men of liberal professions". But it does not apply so completely to "the emoluments of offices" because these are not regulated by the free competition of the market.

Finally Smith discusses taxes which are intended to "fall indifferently on every species of revenue." These are capitation taxes and taxes on consumable commodities. Capitation taxes in so far as they are levied on the lower classes are taxes on wages and subject to the same objections. They are shifted to the consumers.[2] Taxes on commodities are either on necessaries or on luxuries. Taxes on necessaries raise the rate of wages (because wages are fixed partly by the price of necessaries) and fall on the consumers or landlords, acting precisely like a tax on labor. Taxes on luxuries on the other hand will not raise wages but will fall only on the consumers of the particular commodities. In so far as the poor are concerned they act simply as sumptuary laws. It is therefore always to the interest of the richer classes

[1] *Ibid.* II, 461.
[2] *Ibid.* II, 466.

to oppose taxes on necessaries, for all taxes on necessaries are ultimately paid by them, while taxes on luxuries fall on them only in so far as they are consumers of the luxuries.[1]

If we sum up Adam Smith's doctrine of incidence we see that taxes on wages, taxes on profits (except the tax on interest) and taxes on necessaries are always shifted. On the other hand taxes on land and taxes on luxuries always stay where they are put. The classes of society who bear all the taxes are thus above all the landowners, the rich consumers, and to a certain extent the lenders of capital.

Adam Smith's exposition, marked as it is by many profound and suggestive ideas, is entirely dependent upon his peculiar theories of rent, profits and wages. As soon as we deny the validity of his theory of rent, of his treatment of wages as based on the necessaries of life, or of his conception of ordinary profits, his whole doctrine of incidence falls to the ground. And modern economic theory no longer accepts those bases of his theory. Ricardo himself did much to overthrow them. But in so far as Adam Smith based his doctrine of incidence on the theory of free competition without any qualifications and on the inevitable action of his simple economic causes, he may be termed in some sort the forerunner of the absolute theory of incidence.

Ricardo also does not give us any general theory of incidence. As with Smith we must seek his views in connection with the discussion of the separate taxes. Ricardo differs from Smith in his theories of rent and of the relation of profits to wages. Ricardo's theory of economic rent leads him to deny Smith's

[1] *Ibid.* II, 470.

doctrine of the ultimate incidence of land taxes on the landowner. A tax on rent, it is true, will fall wholly on the landlord because, since rent is the surplus above the cost of production, the value of the product cannot possibly be affected by the tax.[1] But it is quite different with taxes on produce, tithes, or land taxes. These will be shifted by the landowners to the consumers. For since price is fixed by the cost of production on land of the poorest quality, whatever increases cost raises price. But a tax which is imposed on all cultivators necessarily increases cost of production. Hence a tax on produce raises price and is shifted to the consumers. A rise of price is the only means by which the cultivator can pay the tax and continue to derive "the usual and general profits" from the employment of his capital. He can not deduct the tax from his rent, for there is no rent on the land which fixes price. He will not deduct it from his profits, because there is no reason why he should stay in an employment with smaller profits. He can therefore pay the tax only by increasing the price.[2]

All land taxes, therefore, except the tax on pure rent, will fall on the consumers. But although every one is a consumer, not all consumers will pay the tax. One large class will remain exempt—the laborers. For a tax on raw produce, like any tax which increases the price of necessaries of life, will inevitably raise wages. "Wages never continue much above that rate which nature and habit demand for the sup-

[1] Ricardo, "Principles of Political Economy and Taxation," Chap. x. (McCulloch's edition, 1876) p. 102. "A tax on rent would affect rent only; it would fall wholly on landlords, and could not be shifted to any class of consumers."

[2] *Ibid.* Chap. ix, p. 91; and Chap. xi, p. 104.

port of the labourer". But as wages rose, profits would fall. A land tax would therefore fall not on the landlord nor the stockholders, but on the capitalist employer of labor.[1]

The question still remains whether the employer could shift the tax. In other words: what is the incidence of a tax on profits? Ricardo agrees with Smith in holding that a tax on the profits of a particular class will inevitably be shifted to the consumers through a rise of price. But in the case of a tax on all profits the problem is less simple. If no attention be paid to foreign trade then a rise of prices would ensue. But since money is a commodity imported from abroad, a rise of prices, if it occurred, could not be permanent. In return for commodities imported the dear goods could not be exported. On the contrary money would be exported until prices had fallen to their former level. The inference is that a tax on profits will be borne not by the consumer but by the producer.[2]

Finally a tax on wages will raise wages. Ricardo here discusses the objections raised by Buchanan to the doctrine of Adam Smith. And he is forced to make the two important concessions that every rise in the price of necessaries does not necessarily raise wages, and that wages are not generally increased

[1] *Ibid.* p. 93. Ricardo seeks to prove that there would not be any considerable interval between the rise in the price of corn and the rise of wages, during which the laborer would suffer. Here, as elsewhere, his conclusions are too absolute, and depend on the wage fund theory.

[2] *Ibid.* Chap. xv, p. 127: "It appears to me absolutely certain that a well regulated tax on profits would ultimately restore commodities, both of home and foreign manufacture, to the same money price which they bore before the tax was imposed." Cf. p. 155. Ricardo reached this position only in the late editions of his work.

by the amount of the tax.[1] But with his characteristic fondness for simple abstractions he goes on to argue as if these concessions did not invalidate his general doctrine. On the assumption then that taxes do raise wages, Ricardo concludes that they inevitably decrease profits.[2] He objects, however, to Adam Smith's contention that the tax will be shifted to the consumers. For since all producers are consumers of each other's goods, every dealer would increase his prices by the increase which he is compelled to pay, and this process would go on indefinitely, which is absurd.[3] Since therefore the tax would rest on profis, it is immaterial whether the taxes be levied on profits or on wages. It is always the profits of stock on which these taxes ultimately fall.

It will be readily seen that these teachings of Ricardo depend entirely on the wage fund theory, on his general doctrine of profits and on the law of eco-

[1] *Ibid.* Chap. xvi, pp. 130, 133: "It must therefore be conceded to Mr. Buchanan that any rise in the price of provisions occasioned by a deficient supply will not necessarily raise the money wages of labor. Taxes so far as they impair the net capital of the country diminish the demand for labor, and therefore it is a probable, but not a necessary, nor a peculiar consequence of a tax on wages, that though wages would rise, they would not rise by a sum precisely equal to the tax". Yet in the very next paragraph he says that he agrees with Adam Smith.

[2] *Ibid.* p. 129: "Taxes on wages will raise wages, and therefore will diminish the rate of the profits of stock. . . . . The only difference between a tax on necessaries and a tax on wages is that the former will necessarily be accompanied by a rise in the price of necessaries but the latter will not. . . . . A tax on wages is wholly a tax on profits, a tax on necessaries is partly a tax on profits and partly a tax on rich consumers".

[3] *Ibid.* p. 135: "If they could all raise the price of their goods so as to remunerate themselves with a profit for the tax: as they are all consumers of each other's commodities, it is obvious that the tax could never be paid; for who would be the contributors if all were compensated"?

nomic rent. They stand or fall with the acceptance or rejection of these doctrines. Two points, however, must be brought prominently forward,—on the one hand the difference between Adam Smith and Ricardo in results, on the other the similarity in methods.

Adam Smith, as we saw, holds that the landowners pay ultimately most of the taxes, bearing as they do all the taxes on land and a great part of the taxes on wages and profits. The "rich consumers" pay a smaller part, and the lenders ot capital a still lesser portion. On the other hand Ricardo maintains that the landowner pays only the taxes on rent proper, but shifts all the other taxes on land. Both Ricardo and Smith agree that wages can never be reached by a tax; but Smith regards the landowners, while Ricardo looks upon the recipients of profits of stock, as the real taxpayers of the country. The one is the advocate of the landed interest, the other of the monied interest.

But while they differ so fundamentally in results they practically agree in methods. What Roscher calls the "magnificent abstractions" of Ricardo are perhaps the more impressive. No allowance is made for conditions or qualifications. The law of competition is assumed as perfect in its operations. The absolute transferability of capital and labor is presupposed. The most far-reaching hypotheses are posited in the innocent belief that they are exemplifications of actual facts. Everything is reduced to its simplest form. The complicated questions of industrial society are treated as more or less plain arithmetical problems. Even though Ricardo's fundamental theory of distribution were correct, his doctrine of incidence would thus be incomplete. It might per-

haps be true so far as it went, but it would even then not go far enough to explain actual phenomena. It fails to notice the practical effects of economic friction. However much we may marvel at his power of analysis we instinctively regard his conclusions with suspicion. Ricardo's doctrine of incidence is premature and inadequate. Because of its rigidity and unyielding abstraction it may be called *par excellence* the absolute theory.

IV.—The Equal Diffusion or Optimistic Theory.

The germ of this doctrine can be found in the renowned Italian economist, Verri. Verri lays down the general principle that every tax naturally tends to bring about an equilibrium because it strikes every one according to his consumption.[1] But the theory was most fully developed in the celebrated book of Canard, which has now become so rare as to justify a somewhat fuller treatment.

Canard expounds his views in a work avowedly written to disprove the Physiocratic theory of incidence. According to him there is not only a natural labor i. e. necessary to sustain existence, but also what he calls acquired labor, as well as superfluous labor, which lay the foundation of all surpluses or rents. There are three rents: *rente foncière*, the result of the fixed labor applied to land or industry; *rente industrielle*,

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[1] Verri, "Meditazione sulla Economia Politica," 1771, XXX. *Cf.* Custodi's collection of "Scrittori Classici Italiani di Economia Politica," Parte Moderna, Tomo XV, 244: "Ogni tributo naturalmente tende a livellarsi uniformemente su tutti gl' individui di uno stato a proporzione delle consumazioni di ciascuno".

[2] F. Canard, "Principes d'Economie Politique." Ouvrage couronné par l' Institut National, 1801.

the result of the *travail appris* in industry, and *rente mobilière,* the result of the *travail superflu* in commerce. The aim of every man is to turn his labor into that particular kind of occupation which will give him the greatest rent or surplus. From this mutual struggle results the system of "equilibrium of advantages", the laws of which are the explanation of all economic phenomena.[1] The balance or equilibrium of these three rents is the foundation of the law of incidence.

All taxes must be paid from one of these three rents, since a tax can never remain on the *travail naturel* which is necessary to existence. All taxes, again, are shifted because they disturb the equilibrium between the rents. Hence it makes no difference how a tax is imposed, whether on rent or on consumption; the incidence will always be the same. For a tax always diminishes the desire or "determination" of the buyer and seller, and no sale will take place until these desires are equalized by each party assuming one-half of the tax. This is the "equilibrium of the determination" to exchange. Thus the first step in the shifting of taxes is like this:

Total tax—T $\frac{1}{2}$ T..................is share of 1st seller.
Share of 1st buyer is $\frac{1}{2}$ T $\frac{1}{4}$ T............ " " 2nd "
" " 2nd " " ...... $\frac{1}{4}$ T $\frac{1}{8}$ T...... " " 3rd "
" " 3rd " " .... $\frac{1}{8}$ T $\frac{1}{16}$ T " " 4th "
" " 4th " " .... $\frac{1}{16}$ T etc.

But of course this is only the first step. The first seller will immediately see that he is bearing one-half of the tax, while only one-quarter rests on the buyer. He will perceive that the buyer's "determination" to exchange is stronger than his. He will hence refuse to sell. But if the buyer assumes an

[1] "L'équilibre des rentes", *Ibid.* pp. 10–12.

additional share of the tax, as he well can, the buyer will for the same reasons shift a part of the tax to the next seller, and so on. There will be no equilibrium until each bears an equal share.

To understand how the burden of the tax is distributed between buyer and seller, Canard likens the system of circulation of goods to a series of communicating tubes. No matter how much water we pour in or out of any one tube, every one of the other tubes will gain or lose until the level is again reached in all. Just as the water will seek its level by distributing itself proportionally to the diameter of each tube, so every tax will be distributed equally between buyers and sellers according to their capacity of labor.[1] Hence it is utterly useless for economists to devise schemes for taxing forms of business which seem not to be hit by any existing tax. It is utterly futile for the banker or merchant to hide his books. For the taxation of one branch of industry is like the operation of cupping. The vein from which the surgeon has taken the blood is not more bloodless after the operation than any of the other veins in the body. So it is with the profits which a tax on any branch of industry diminishes; the profits of all other branches flow in at once, until the equilibrium is

[1] "Pour concevoir comment l' impôt se répartit sur tous les acheteurs-vendeurs, imaginons une suite de tubes se communicant entre eux; si dans l'un d'eux on verse un liquide quelconque il s'écoulera successivement dans tous les tubes, et l'écoulement cessera lorsqu'il y sera de niveau. Alors le liquide sera réparti dans tous les tubes proportionellement à leur diamètre, de même que l'impôt est réparti sur tous les acheteurs-vendeurs proportionellement à la capacité de leur travail". *Ibid.* p. 61. *Cf.* p. 233: "Les lois d'équilibre dans le système général de la circulation sont les mêmes que les lois de l'équilibre des fluides".

restored.[1] It may be said, in fact, that the burden of the tax finally disappears and that the tax is ultimately borne by no one at all.[2]

However, Canard confesses that it takes some time for this equilibrium to be realized. There will be many contests between buyers and sellers, and many difficulties in the way. These difficulties he calls the "friction of taxation".[3] During this period even the "natural labor" or the wages of the ordinary laborer may be affected by the tax. Moreover this period of friction produces serious fluctuations which throw all business into confusion until the equilibrium is again reached. It is not so much the tax which causes the trouble, as the derangement of the equi-

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[1] "C'est donc bien vainement que les économistes s'épuisent en moyens pour chercher à atteindre par l'impôt les branches qui lui paraissent inaccessibles. L'impôt que l'on perçoit sur une branche d'industrie ressemble à la saignée que le chirurgien fait au bras: la veine qu'il a piquée n'est pas plus appauvrie du sang après l'opération que toutes les autres parties du corps. Il en est de même du gain que l'impôt soutire d'une branche; le gain des autres branches vient tout à coup y affluer pour rétablir l'équilibre." *Ibid.* pp. 168-169.

[2] "On peut dire à la rigueur que la charge de l'impôt finit par être tout à fait nulle, et n'est supportée par aucun individu". *Ibid.* p. 178. In another passage Canard pictures the process as follows: "Ainsi, voici la marche que suit la charge de l'impôt. 1° elle s'écoule d'abord de celui qui le paie le premier sur tous les autres acheteurs-vendeurs et consommateurs de la même branche. 2° De là elle se répand de proche en proche sur toutes les autres branches, par la nouvelle concurrence qu'apportent ceux qui quittent les branches imposeés, pour attacher a celles qui ne le sont pas. 3° Enfin cet excés de concurrence va se perdre dans la branche immense de l'effort politique alimentée par l'impôt, et dont la consommation dédommage les autres branches de la diminution de la consommation superflue qui en résulte. Alors la charge de l'impôt est entièrement de niveau, alors elle n'est plus sentie". *Ibid.* p. 180.

[3] "Cette difficulté c'est ce que j'appellerai le frottement de l'impôt", p. 181.

librium. Hence, concludes Canard, we may advance this great truth: "Every old tax is good, every new tax is bad".[1] A government which has not a fixed, invariable system of taxation is like the planter who is continually changing his methods, but whose land in the mean time produces nothing until the owner himself is ruined.[2] Every tax becomes good provided it lasts long enough.[3] But curiously enough Canard's practical solution of the problem is found in the proposal to replace all existing taxes by a tax on salt.

The theory of Canard was accepted by several writers, notably by Courcelle-Seneuil and Cherbuliez in France and by Prittwitz in Germany. Courcelle-Seneuil tells us that old taxes act exactly like climatic or agricultural disadvantages. The whole community is poorer than it would be if these disadvantages did not exist, but the disadvantages are spread over the whole community.[4] Cherbuliez expresses the

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[1] "On voit donc que ce n'est pas l'impôt par lui même qui fait le mal, mais seulement le dérangement de l'équilibre qu' il cause. Donc on peut avancer cette grande vérité, *que tout vieil impôt est bon, et tout nouvel impôt est mauvais*". *Ibid.* p. 197.

[2] "Le gouvernement qui n'a pas une manière fixe et invariable d'impositions ressemble à un propriétaire qui après avoir fait une plantation s'en dégoûte, la change pour une autre et celle-ci pour une autre encore; pendant ce temps la terre ne produit rien, et le propriétaire se ruine".

[3] "Tout impôt ne devient bon que par sa vétusté". *Ibid.* p. 233. *Cf.* p. 202.

[4] "Lorsque les impôts ont reçu la sanction du temps, ils ne touchent plus a la propriété d'aucun individu en particulier, parceque chacun a arrangé sa vie en vue de son existence. Ils agissent alors exactement comme les inconvénients du climat et du sol: la société en général est moins riche que si ces inconvénients n'existaient pas; mais cette diminution de richesse se trouve repartie de telle façon que toutes les forces mécaniques sont dans leur équilibre naturel". Courcelle-Seneuil, "Traité d'Economie Politique," I. 462 (2nd edition, 1867. The first edition appeared in 1857.)

same idea, but in somewhat modified form, in saying that stability is the best, as mobility is the worst, quality of a tax system. All taxes, no matter how bad at first, gradually become good.[1]

The theory reached its final stage in the German writer Prittwitz who maintained that the only way to secure a just and equitable distribution of taxes was through a permanent, immutable system, and that this would be equally true even though the system was at its inception the most absurd and burdensome imaginable.[2] It is for this reason that I have termed the theory the "optimistic" theory.

The writer, however, who may be said to share with Canard the doubtful honor of founding the optimistic theory is Thiers. Thiers wrote quite independently of Canard, and he is of especial importance as being the inventor of the term "diffusion" of taxes,—a term which he borrows from the science of optics. He compares the shifting of taxes to the diffusion of the rays of light, and lays down his principle in the following words: "Taxes are shifted indefinitely and tend to become a part of price of commodities, to such an extent that every one bears his share, not in proportion to what he pays to the state but in propor-

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[1] "La stabilité est le mérite le plus essentiel, la mobilité le plus grave défaut qui puisse avoir un régime pratique de fiscalité. Tout système d'impôt, quelque vicieux qu'il puisse être en théorie, au point de vue de la répartition, va s'améliorant en pratique avec les années, à mésure que les effêts immédiats du prélèvement sont amortis et successivement effacés par l'action toujours graduelle, souvent très lente, mais invariable et certaine, des lois qui gouvernent la vie économique des sociétés". Cherbuliez, "Précis de la Science Economique," 1862, II, 457.

[2] "Denkbar abenteuerlichste und drückendste" are the words used by Prittwitz. Cf. his Kunst, reich zu werden (n. d.), 635–655, and his "Theorie der Steuern und Zölle," 1842, 107–116, etc. etc.

tion to what he consumes".[1] The arguments with which Thiers supports his theorem are as follows: The manufacturer who pays taxes, whether direct or indirect, adds the tax to the price of the commodity, for, consciously or not, he necessarily fixes the price so as to recompense him for all his outlays plus a certain profit. Otherwise he would quit the business. The tax is simply a part of the cost of production. This is true not only of the manufacturer, but of the farmer. If he is to remain in the occupation of agriculture, all his outlays must be made good. And so again the laborer is precisely in the same situation. For unless his wages increase by the amount of the tax he would change his occupation or die of hunger. Thus all taxes are indefinitely shifted.

When we remember that Thiers' whole work was written simply to prove the divine and absolute rights of private property we need not feel surprised at his conclusions. For he tells us that according to this most wise and reassuring law of providence, no matter what the government may do, it is always the rich who pay most of the taxes, because they consume the most.[2] To the socialists he says: hands off, do you not see that the rich already pay most of the taxes? To the radicals who wish to restrict the province of indirect taxes because they bear heavily

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[1] A. Thiers, "De la Propriété," 1848, p. 380: "L'impôt se répartit à l'infini, et tend à se confondre avec le prix des choses au point que chacun en supporte sa part, non en raison de ce qu'il paye à l'Etat mais en raison de ce qu'il consomme." *Cf.* p. 382: "L'impôt se répercute à l'infini, et de répercussion en répercussion devient en définitive partie intégrante du prix des choses. C'est ce qui j'appelle la diffusion de l'impôt."

[2] *Ibid.* p. 389: "Par une loi des plus sages, des plus rassurantes de la Providence, de quelque facon que s'y prennent les gouvernements, le riche est après tout le plus soumis a l'impôt".

on the poor he says: stop, that is not true, the rich already pay more than their share.

The logical conclusion of what Thiers calls this "rigorously true" theory of incidence would undoubtedly be that it makes no difference what system of taxation is adopted. "God forbid that I should maintain such a heresy",[1] cries Thiers, much to our surprise.

He demands in the first place equality of taxation, but without attempting to show in what this equality consists. Secondly he makes the important concession that although the tax is ultimately shifted, for the time being it is a burden on the first payer. But he at once complacently ignores these concessions and maintains that in the long run, no matter what the government does, it is always the rich who pay the taxes.

It is to be noticed that this exceedingly shallow doctrine of Thiers met with almost no success in France, where de Broglie is about the only writer who has adopted it, in speaking of the "indefinite repercussion" of taxes.[2] It is remarkable, however, that it should have found adherents in other countries. The most noteworthy modern follower of Thiers is the Austrian professor, Stein, who goes so far as to declare the whole doctrine of shifting to be the result of a "marvellous confusion of thought". For according to Stein every tax is shifted by everybody on everybody, since everybody only advances the tax for somebody else who uses his productions. According to this theory there would naturally be no need of a science of taxation at all. In place of the

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[1] "Dieu me préserve de soutenir une pareille hérésie".

[2] De Broglie, "Le libre échange et l'impôt," 48.

"confused doctrine" of shifting of taxes Stein advanced the "simple idea of the production of taxes", the idea namely, that "the total amount of all taxes must be really produced every year as the surplus of production".[1]

Although this conception may be very "simple" to Stein, it must be said that even all subsequent German writers have been unable to understand what it means, and that we may therefore be excused from attempting to unravel the mystery.

In England the equal diffusion theory was virtually advanced already in the eighteenth century by Lord Mansfield. "I hold it to be true," said he, "that a tax laid in any place is like a pebble falling into and making a circle in a lake, till one circle produces and gives motion to another, and the whole circumference is agitated from the centre".[2] But Mansfield made no further application of the doctrine. Later on Martin summed up the theory in the words: "The public are the persons on whom the taxes fall, no matter how they may be artfully diverged in their

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[1]Stein, "Finanzwissenschaft," 4th ed. (1878), I, 493–497: "Die Lehre von der Uberwälzung der Steuern ist eine der wunderlichsten Begriffsverwirrungen, die es je in der Wissenschaft gegeben hat. . . . Das grosse Resultat ist das jede Steuer von jedem auf jeden überwälzt wird. . . . . An die Stelle der unklaren Ueberwälzung der Steuern tritt der klare Begriff der Production derselben. . . . . Die Gesammtsumme aller Steuern muss alljährlich als Mehrwerth der Production von dem Volke wirklich producirt werden. . . . Das ist der einfache Begriff der Steuerproduction". The most recent attempts to understand, and at the same time combat, Stein are found in the two Dutch works: "Cort van der Linden, Leerboek der Financiën," 1887, §81, pp. 156-162; and Pierson, "Leerboek der Staathuishoudkunde," 1890, II, 448–455.

[2]Speech on taxing the Colonies, 1766, in his "Collected Speeches." Quoted by F. A. Walker, Wages Question, 316.

course".[1] But the chief modern writer who adopted the equal diffusion theory is Gibbon, although he did not draw the logical conclusions. Gibbon states that "all taxes direct or indirect paid by the producers or importers of commodities, and by the dealers therein, ultimately fall upon and are paid by the consumers, by whomsoever such taxes may have been paid to the collectors thereof or into the public chest".[2] Gibbon applies this rule to practically all taxes, for taxes on land are according to him taxes on the produce of the land, and taxes on profits or income taxes fall in the long run also on the consumers.[3]

In America, where there has been but little serious study of taxation, the few writers of prominence are, remarkable to relate, almost all abject followers of Thiers. America may, in fact, claim the honor of being the only country in the world where the doctrine is still upheld. The chief representative of this easy going, complacent doctrine is David A. Wells. Mr. Wells lays down the general principle that "taxes equate and diffuse themselves, and if levied with certainty and uniformity they will, by a diffusion and repercussion, reach and burden all property with unerring certainty and equality. All taxation ultimately and necessarily falls on consumption."[4] The

[1] R. Montgomery Martin, "Taxation of the British Empire," 1833, 245.

[2] Alexander Gibbon, "Taxation, its Nature and Properties," 1851, 18.

[3] *Ibid* 19, 26, 33.

[4] Article "Taxation" in Lalor's "Cyclopaedia of Political Science," III, 88. The editor of this Cyclopaedia makes the remarkable statement: "Mr. Wells' views are in harmony with those of Adam Smith, Ricardo, James Mill, Thiers, McCulloch and Say". A most delightful jumble!—*Cf.* another statement of Mr. Wells' theory in the second report of the New York Tax Commission, 1872, p. 47, where he quotes Thiers approvingly.

same opinion has been advanced by Isaac Sherman in the statement that "all proportional contributions to the state from direct competitors are diffused upon things and persons by a uniformity as manifest as is the pressure upon water which is known to be uniform in all directions".[1] Even Judge Cooley is not entirely free from a share in this opinion.[2]

President Walker is the only American writer who has questioned the truth of the optimistic theory.[3] But he seems to overlook the fact that this is only one among many theories of incidence, and that the problem of shifting cannot be solved simply by a negation of the equal diffusion doctrine.

The optimistic theory is so very superficial as scarcely to deserve a refutation. It has never been accepted by any writers of importance except the few already mentioned; and the weakness in the logic has been shown a hundred times. It is needless to repeat these arguments here as our review of the eclectic theories as well as the whole positive and constructive part of the present monograph will substantially show the shallowness of the doctrine in every particular case. Were the theory true, there would be no need for any investigation like the present.

V.—The Pessimistic Theory.

The pessimistic theory like the optimistic theory is also based on the doctrine of diffusion, but draws entirely different conclusions. Its chief apostle is

[1]Sherman, "Exclusive Taxation of Real Estate and the Franchises of a few specified moneyed Corporations," 1874.

[2]Cooley, "A Treatise on the Law of Taxation." (2nd ed. 1886) p. 38.

[3]Walker, "Political Economy," 3rd ed., 1888, §§ 606–610.

the great anarchist, Proudhon. According to Proudhon all taxes are in last resort taxes on the consumer. Try as the legislature may, he cannot prevent this shifting. The whole distinction between direct and indirect taxes is useless. The result must always be "fiscal nonsense".[1] For since the mass of the consumers are the poor, all taxes are unjust because they inevitably press on the poor more than on the rich. This constitutes the inevitable iniquity of taxation.[2] Taxation is necessary and yet taxation is necessarily iniquitous. This is one of Proudhon's famous "contradictions économiques". "The problem of taxation is hence insoluble. The fault lies neither with the principle of proportion, nor with the revolution, nor with the government; neither with ideas nor with men; the fault is to be found in the institutions, which themselves depend on the nature of things".

Proudhon's pessimism is as superficial as Thiers' optimism. Each contents itself with words instead of arguments. And yet, however widely they diverge in practical results, the theories are virtually at one in that, according to each, it really makes no difference what sort of taxes are imposed. With such

[1] "En resumé, de quelque manière qu'on s'y prenne avec l'impôt, on obtient zéro de résultat. C'est toujours la consommation qui le paye . . . . Voici qui met le comble à la déraison fiscale. En dernière analyse l'impôt est acquitté par la masse." Proudhon, "Théorie de l'Impôt." New edition, 1868, "Oeuvres complètes," XV, 206, 166.

[2] L'iniquité de l'impôt ne vient donc pas de lui, elle a son principe dans ces transformations engrenées, dans cette oscillation universelle, dans ces inéqualités organiques, qui sans cesse, par leur agitation incoercible, rejettent sur le produit, et conséquemment sur la masse des consommations, ce que l'impot s'était efforcé de répartir entre les propriétés, les maisons, les industries, les capitaux, les loyers, etc. . . . . *Ibid.* 222.

theories as these the whole science of finance becomes a needless piece of jugglery and mystification.

A recent American writer, Albert S. Bolles, may also be regarded as an advocate of the pessimistic theory, although he would probably resent any statement that he had been influenced by Proudhon. In fact he bases his pessimism on the uncertainty of the process of shifting. According to Mr. Bolles "no uniform law or rule prevails or can possibly be established with respect to the transfer [of taxes]" . . . . "A tax which is fairly assessed on all property in the beginning proves a highly unjust tax in its operation. . . . . Some are obliged to bear the whole burden, they can shift no part of it; others are more fortunate and shift a portion; others are engaged in such a business, or happily are owners of such property, that they can shift the whole, or nearly the whole burden". The whole system thus results in the greatest inequalities.[1]

It is true that Mr. Bolles applies his doctrine only to the general property tax. But the reasoning is equally applicable to other taxes. For in the matter of incidence there is very little difference, as we shall see later on, between a tax on property and a tax on profits; and almost all taxes may be declared to be in the wider sense of the term taxes on profits. If it is true that an equal tax always results in gross inequalities, the outlook for just taxation would indeed be poor. But, as we shall see, it is an exaggeration to say that "uniform rules cannot be established." Pessimism we shall find to be as untenable as optimism.

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[1] Report of A. S. Bolles in Report of the Revenue Commission appointed by the act of the Legislature of Pennsylvania, May 25, 1889, (1890), 142.

VI.—The Capitalization or Amortization Theory.

The origin of this theory is connected with the discussion of the land tax. It can be traced far back to the beginning of the century. The theory is that since the land tax falls exclusively on the landowner—at least according to the opinion of the economists concerned—the effect of the tax will be to depreciate the value of the land by the capitalized value of the tax. That is, since the value of land is fixed by the net produce from the land, the tax which will operate to decrease this net produce will diminish the value of the land by an amount equal to the capitalized value of the tax. The individual who purchases this land will pay for it only this diminished value, and will therefore be free of taxes, since he has discounted the tax in the smaller price paid for the land. The tax, in other words, has become a perpetual rent-charge, allowance for which is made in any transfer of the property. The conclusion drawn from this argument is that a tax on land, after its first imposition, is borne by no one, since it is paid once and for all and is then immediately shifted off in a capitalization of the tax; and that it is therefore entirely immaterial how low or high the rate may be, provided it be constant. This is known as the capitalization or amortization theory, according as we look to the increase or the diminution of the capital value. Applied especially to land it is also known as the rent charge theory, because the taxes are assumed to cease to be taxes on the owner and to become rent charges in favor of the state.

The germ of the doctrine may be found in an author hitherto singularly neglected, the only English

writer to devote a separate volume to the questions of public finance, John Craig. Craig tells us that the tax is "altogether paid by the present proprietors to the entire exemption of future purchasers", making use of the argument advanced above.[1] But Craig hedges his exposition with an important condition, to be discussed in a moment, inattention to which has led succeeding authors to very absurd results.

Some of the early German writers on public finance, like Sartorius, Hoffmann, and Murhard, went so far as to declare that a land tax was therefore no tax at all, but that, since it acts as a rent charge capitalized in the decreased value of the land,[2] it would be virtually a confiscation of the property of the original owner. On the other hand since the future possessors would otherwise go scot free, it would be necessary to levy some other kind of a tax on them.[3]

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[1]Craig, "Elements of Political Science," 1814, Vol. III., 38: "As the free rent of land will be diminished by the tax, the price of each estate will proportionally decline. If the nett rent be reduced by a tax of 4 sh. in the pound, from £100 to £80 a year, the estate which was formerly worth £3,000 will no longer sell for more than £2,400. A proprietor therefore who wishes to dispose of his land, will at once be deprived of one-fifth of his property. Instead of paying £20 a year during his possession, and leaving his annual payment as a burden on the lands, he finds himself obliged to pay £600, the value of the tax, forever, while his successor is exempted from all contribution".

[2]The Germans call the rent charge theory "Die Reallast-theorie der Grundsteuer".

[3]"Alle und jede fixirte Grundsteuern müssen sonach im Fortgange der Zeit und im Verkehre mit Grundstücken die Natur der Steuern gänzlich verlieren, und sich in Staatsrenten verwandlen". Murhard, "Theorie und Politik der Besteuerung," 1834, 295; *Cf.* p. 327. For the necessity of laying new taxes on future holders see *Ibid.* p. 366. *Cf.* Hoffmann, "Die Lehre von den Steuern," 1840, 110; Sartorius, Ueber die gleiche Besteuerung des Königsreichs Hanover, 92; v. Prittwitz, Theorie der Steuern und Zölle, 1842, 132.

In France we find the theory already in part expressed by J. B. Say, although he did not draw the same conclusions.[1] But the doctrine is most clearly expounded in the work of Destutt de Tracy, who made the "singular and important observation" that when a tax is laid on land, a value equal to the capital of the tax is at once taken from the actual proprietors, and that when all have changed owners, it is really no longer paid by any one. But it is remarkable that Tracy applied his doctrine also to taxes on houses and annuities.[2] Several decades later the capitalization theory was most elaborately defended by Passy, who has often, but erroneously, been deemed the real founder of the doctrine. He drew the logical conclusion that the rate of the tax must never be changed. To increase it would be to confiscate the property, to reduce it would be to make a free gift of the capitalized value of the tax to the landowner.[3]

[1]Say. "Traité d'Economie Politique," 1802, Book III, Chap. X, (8th ed. 1876, p. 565): "Le propriétaire ne peut, même par la vente de son fonds, se soustraire au fardeau de l'impôt: car le fonds n'est payé en principal qu'en proportion de ce que l'impôt lui laisse valoir en revenu. . . . . C'est comme si le gouvernement prenait un cinquième de la terre". In a work subsequently published by Craig, "Remarks on some Fundamental Doctrines of Political Economy," 1821, he calls attention to the fact that Say entertained many of his views, although neither had seen the work of the other.

[2]Destutt de Tracy, "Traité d'Economie Politique," 1815, Chap. xii. *Cf.* the American translation by Thomas Jefferson, Georgetown, D. C., 1817, 207-210.

[3]"Une rémarque essentielle, en ce qui concerne l'impôt territorial, c'est qu'il finit par ne plus être constitué à titre véritablement onéreux pour ceux qui l'acquittent. Cet efféṭ résulte des transmissions dont la terre est l'objet. . . . On ne peut élever le taux de l'impôt sans râvir aux propriétaires non seulement une portion des revenus dont ils jouissent, mais encore du capital même du nouveau tribut annuel mis à leur charge. On ne peut, au contraire, abaisser ce taux sans leur faire don d'une rente appartenant a l'état, et en

The doctrine in France is generally known as the theory of the immutability of the land tax (théorie de la fixité de l'impôt). And it has been accepted by several other French economists. Thus Garnier maintains that a tax on land is really an expropriation of the original owner to the manifest advantage of the future proprietors.[1] We find the same ideas in Wolowski, Du Puynode, Cherbuliez and Walras.[2] Even Leroy-Beaulieu, although he terms it a "remarkably ingenious theory, with all the appearance of great scientific precision", simply objects that it is "much too absolute"; without going to the pith of the matter.[3] The doctrine itself probably reached its final stage in the statement of Stein that this question is the most important in the whole domain of taxation, and that the land tax must never be increased.[4] Parieu, who was himself not very clear

même temps du capital de cette même rente". H. Passy, Art. Impôt in "Dictionnaire de l'Economie Politique", 1852, 902. — Denis L'Impôt, 1889, 161, errs in ascribing the origin of the doctrine to Passy. Pantaleoni, "Teoria della Traslazione dei Tributi", 1882, 173, seems to make the same mistake.

[1] "Un impôt foncier, quand on l'établit, est une sorte d' expropriation du propriétaire pour une certaine partie de son fonds; mais l'acheteur qui lui succède paye la terre en conséquence ét ne subit plus l'impôt". Garnier, "Traité de Finances", 4th ed. (1885), 100, 103.

[2] Wolowski, *Journal des Economistes*, 1866, IV, 141. "Tout accroissement de l'impôt direct sur la propriété ne porte que le nom d'impôt: il est en réalité une confiscation partielle déguisée sous une apparence trompeuse". *Cf.* Du Puynode, "De la Monnaie, du Crédit, et de l'Impôt", 1843, II, 171; Cherbuliez, "Précis de la Science Economique", 1862, II, 437; Walras, "Eléments d'Economie Politique Pure", (2nd ed., 1889), 572, and "Théorie Critique de l'Impôt", 1861, 34.

[3] Leroy-Beaulieu, "Science des Finances", 3rd ed. 1883, I, 319.

[4] "Im Allgemeinen ist nun kein Zweifel, dass eine solche Erhöhung im ganzen Gebiete der Besteuerung die ernsteste und wichtichste Frage ist welche überhaupt hier vorkommen kann. . . . Das allgemeine Princip daher muss sein . . . dass die Grundsteuer

on the subject, shows very well that this doctrine of immutability necessarily leads to the English idea of the redeemable rent charge.[1]

In England the theory has seemed to derive some support from the fact that the land tax is indeed a redeemable rent charge. But that is owing simply to the peculiar circumstances of the case. The land tax which was originally a general property tax[2] came to be considered a fixed and invariable tax of four shillings in the pound. In 1798 it was made perpetual at that rate, and the landowners were given the privilege to redeem it, that is to free the land from taxation by paying a certain lump sum. In England, therefore, the land tax is indeed a redeemable rent charge, but only because expressly made so by statute. This is what led Greg to maintain that the land tax was not a burden upon the land because the state had become a permanent proprietor jointly with the owner of the estate; and led Senior to express the same views in distinguishing between the incidence of a new tax and of a fixed permanent land tax.[3] To draw any general conclusions as to the incidence of taxation in general would be wholly inadmissible. Especially the inference that it is always wrong to impose a new tax or to increase an old tax on land would be utterly unjustifiable.

niemals erhöht werden darf".—"Lehrbuch der Finanzwissenschaft", 4th ed. (1878), II., 55. In the 5th ed. (188?) this passage is omitted. *Cf.* II, 103–105.

[1]Parieu, "Traité des Impôts", (2nd ed. 1866), I. 273: "Cette immutabilité n'est que la timide premisse de sa rachetabilité".

[2]See my article on "The General Property Tax." *Political Science Quarterly*, V, No. 1.

[3]Select Committee of House of Lords on the Land Tax, 1846, Qu. 5479–5510.

The truth of the matter simply is that the whole theory applies to the land tax only where the land tax is the sole tax levied. The capitalization theory of incidence is true of the land tax only in so far as it is a partial or exclusive tax. Above all, it is not a whit more applicable to the land tax than to any other tax.

This was already clearly perceived by Craig—a fact that seems to have utterly escaped the attention of succeeding economists. For Craig expressly tells us that his theory holds good only in case "a land tax be imposed without an equivalent duty on every other species of property." He further states that exclusive taxes in general, like exclusive taxes on land, fall ultimately on the present proprietors of that species of property which is taxed.[1] John Stuart Mill practically entertained the same opinion although he did not work out his theory and contented himself with asserting that "a peculiar tax on the income of any class, not balanced by taxes on other classes, is a violation of justice and amounts to a partial confiscation."[2] As to the other English writers, Dudley Baxter discussed the "strange theory" of the rent charge as applied to the land tax, the poor rate, the succession, probate and legacy duties. But although

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[1] Craig, "Elements of Political Science," III, 37, 82–86.

[2] Mill, "Principles of Political Economy". Book V, Chap. iii, §2. In another passage he shows that an exclusive tax on "realized property . . . would fall exclusively on those who happened to compose the class when the tax was laid on . . . Future buyers would acquire land and securities at a reduction of the price equivalent to the peculiar tax, which tax they would therefore escape from paying; while the original possessors would remain burthened with it even after parting with the property. . . . Its imposition would thus be tantamount to the confiscation for public uses of a percentage of their property." Book V, Chap. ii, §3.

he professed to discover three fallacies in the argument, none of his objections really goes to the root of the matter.[1] Noble, in his chapter which deals solely with the very broad facts of incidence, mentions the rent charge theory only in connection with the land tax.[2] Sidgwick, who sees that the rent charge theory applies only to a *special* tax on land, limits the doctrine to "any particular kind of durable wealth of which the supply absolutely limited". But he does not make the reasons clear and fails to see the real scope of the theory.[3]

The only French writer, in addition to Destutt de Tracy, who attempted to generalize the conception of the capitalization of incidence, was Cournot. He expounded the theory already at an early period, although in other words. Above all he applied it only to articles subject to the law of monopoly.[4] But even Cournot drew no general conclusions from the theory.

It was reserved for the German economists to set forth the truth in the capitalization theory. The earliest writer to discuss it fully was Rau. Rau shows that the theory is not entirely true of the land

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[1]Dudley Baxter, "The Taxation of the United Kingdom", 1869, 50–55.

[2]Noble, "National Finance", 1875, 282. *Cf.* Noble, the Queen's Taxes, 1870, 146.

[3]Sidgwick, "Principles of Political Economy", 1883, 569.

[4]"On peut même dire que cet impôt [fixed or proportional to net profits] ne fait tort qu'aux premiers possesseurs, aux inventeurs et en général à ceux qui jouissaient du fonds productif au *moment* de l'établissement de l'impôt, et à leur successeurs à titre gratuit. Car les successeurs à titre onéreux règlent leur prix d'acquisition sur le produit net, défalcation faite de l'impôt; et si le fonds vient à être degrèvé entre leurs mains, c'est pour eux une véritable épave". Cournot, "Récherches sur les Principes Mathématiques de la Théorie des Richesses", 1838, 75.

tax, first, because the original owners or their heirs often retain possession, so that there may be no chance for a diminution of the capital value through purchase and sale; and secondly, because the value of land is fixed not alone by the net produce but sometimes by other factors, such as a change in the demand or in the rate of interest. In such a case it cannot be said that the new purchaser does not feel the tax, because it is difficult for him to realize clearly that he paid less for the land on account of the tax. But in so far as the theory is true, it applies only to so much of the land tax as exceeds the usual rate of taxes on other commodities. Above all the same argument is true of every tax levied on objects of varying value capable of sale—whether houses, stocks, bonds, or other capital.[1]

Other writers like Helferich and Hock developed the doctrine,[2] and it has recently been clearly expounded by Schäffle.

Schäffle would naturally enlarge the rent charge theory into a general capitalization theory, because of his doctrine of the universality of the rent principle—the doctrine, which has lately been made familiar to English readers by a number of writers, that the theory of rent is not confined to land but is applicable also to all profits on capital.[3] Since Schäffle the capi-

[1] Rau, "Grundsätze der Finanzwissenschaft", 5th ed., 1865, II, 22–27.

[2] Helferich, "Ueber die Einführung einer Kapitalsteuer in Baden". In Tübinger *Zeitschrift für die gesammte Staatswissenschaft*, 1846, 291 *et seq;* Hock, "Die öffentlichen Abgaben und Schulden", 1863, III, *et seq.*

[3] Schäffle, "Die Grundsätze der Steuerpolitik und die schwebenden Finanzfragen", 1880, pp. 176, 187, 190. Schäffle's general theory of rent and profits was first published in 1867, in his "Nationalökonomische Theorie der ausschliessenden Absatzverhältnisse." The theory itself

talization theory has been accepted by Pantaleoni[1] in Italy and by Pierson[2] in Holland, but they all fail to notice some of the qualifications which I shall now proceed to mention.

The general theory of capitalization may be expressed as follows: When a partial tax is imposed on any class of commodities to the exclusion of all other classes, whether the commodity consist of land or of any other taxable object, the tax will fall entirely on the original owner of the commodity before the tax was imposed, and not on the future purchaser; because the tax will be discounted in a depreciation of the capital value of the article by a sum about equal to the capitalized value of the annual tax. In the same way when unequal taxes are levied on different classes of commodities, the excess of the tax in the overtaxed commodity over and above the general rate will be capitalized, so as virtually to exempt future owners from their surplus taxation. But this will be true only on the three conditions:

(1) That the tax is levied on a commodity or object which is capable of an annual rental value and which has a capital value;

(2) That the tax cannot be shifted to the consumer by the fact of the commodity being used in further production;

(3) That the general relations of demand and supply remain in other respects the same.

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is already found in Mangoldt, "Die Lehre vom Unternehmergewinn", published in 1855.

[1]Pantaleoni, "Traslazione dei Tributi", 179, who chides Schäffle for not giving credit to Rau. But he forgets that Craig preceded both Rau and Schäffle.

[2]Pierson, "Leerboek der Staatshuishoudkunde", Vol. II, 1890, 391-409: "Amortisatie van Belastingen".

Thus the principle of capitalization would not apply to taxes on income in general or to special taxes on wages, etc., because there is no capital value which is subject to amortization or capitalization. Again, secondly, the principle would not apply if the tax can be shifted to the consumer. For the tax will then simply raise the price of the product, instead of lessening the value of the principal or source of the product. Thus an exclusive tax on commodities may be shifted to the consumer. Capitalization of taxation is just the opposite of shifting of taxation, although they have been frequently confounded. If a tax is shifted it cannot be capitalized; if it is capitalized it cannot be shifted. Capitalization implies a depreciation of the capital value; but this is possible only when the tax rests on the possessor, i. e. when it is not shifted to any one else, like the purchaser or consumer.

Finally, the principle would not apply to special taxes on property or profits if the capital value of this class of commodities should for any other reason fluctuate in price. For example, if a special tax were levied on government securities it might nevertheless happen that for some reason confidence in government bonds as over against general securities might decrease to such an extent as to counterbalance the decreased returns from the investment. In such a case there would be no capitalization of the tax. Thus again, in the case of a special tax on land, the value of land as an investment might increase when compared with other forms of investment. This also would nullify the action of the principle. The doctrine of capitalization holds good only on the assumption that other things are equal. It is based on the

theory of normal cost, or on normal demand and supply. It is only in the absence of disturbing causes, which must be investigated separately in each particular case, that the increase of an exclusive tax results in a partial confiscation, or that its decrease is tantamount to a free gift.

With all these qualifications the capitalization of taxation remains an important topic in the study of incidence. Its cause is inequality; its result is confiscation or gratuity.[1]

VII.—The Eclectic Theory.

The absolute theory as well as the equal diffusion theory soon met with considerable opposition. Most of these opponents, however, have confined themselves to criticism and to the elaboration of a few special points. We may sum them up under the head of the eclectic school.

One of the first authors who attempted to show the weakness of both Canard and Ricardo was J. B. Say. According to Say a tax on any article, when followed by a rise in price, falls on the consumer, but only in part. For increased prices mean diminished consumption, and smaller demand means decrease of profits. So that even here the producer may bear a part of the tax. The tax is like the powder that

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[1]For an application of the general theory to a special tax see my article on "The Taxation of Corporations", *Political Science Quarterly*, Vol. V, esp. 671–674. I may add that the article mentioned was written before I had begun the present investigation, and that I was at the time ignorant of the fact that the general principle had already been discussed by some of the foreign writers.

affects both the ball which it propels and the cannon which it causes to recoil.[1]

Hence a tax never increases price by the full amount of the tax. When the price of the article does not rise, the producer bears the whole tax. But everything depends on the article, whether it is a matter of necessity or luxury. If the tax is levied on raw materials it affects more or less the prices of all other products. Direct taxes on producers again affect consumers very unequally. For there is no such thing as an equality of profits. The producers of some commodities can shift the burden far more easily than others. For the doctrine of transferability of capital is far more true of circulating capital than of fixed capital or land. Moreover Canard's analogy between taxes and the cupping of the arm in its influence on the whole body is misleading. For the wealth of society is not a fluid seeking its own level. It may rather be likened to a tree, an attack on one of whose branches may kill the branch without mortally wounding the tree. The richer the branch, the greater the danger to the whole tree. But an analogy, however good, is not a proof. Hence, concludes Say, it is very rash to affirm that a particular tax falls definitely on a particular class. Taxes fall on those who cannot escape them. But the methods of escape are numberless, and vary with the tax or with the state of the market. Nothing is more uncertain, nothing more variable than the incidence of taxation.[2] The writers of the abstract school reason

[1] "C'est l' effort de la poudre qui agit à la fois sur le boulet qu'elle chasse et sur le canon qu'elle fait reculer". Say, "Traité d'Economie Politique", 1802, Book III, Chap. x, 8th ed. (1876) p. 562.

[2] "On voit combien il est téméraire d' affirmer comme une principe général que tout impôt tombe définitivement sur telle classe de la

on assumptions to which the every-day facts give the lie.

On the other hand Say immediately follows this statement with the assertion that a landowner can *never* shift the tax to the consumers—a statement which seems to be quite as absolute as those against which he directs his arguments. The land tax will remain on the landowner because the tax cannot normally affect the products, and since the supply does not change, the price cannot. But still, Say concludes, it is impossible to lay down any general principles on incidence. In a machine so complicated as that of society taxes are paid in many an elusive form.[1]

Another heated opponent of Ricardo was Sismondi. Sismondi starts out by asserting that in the case of taxes on articles on consumption one can never say beforehand by whom they will be borne, because of the complexity of the conditions of the market. He discusses the "abstractions" of Ricardo, and especially his theories of taxes on raw produce and wages. Sismondi fulminates eloquently against the absolute doctrines of equality of wages and profits and the transferability of labor and capital,—the cornerstones of Ricardo's theory. "What, are the farmers to

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société ou telle autre. . . . Les impôts tombent sur ceux qui ne peuvent pas s'y soustraire. . . . . mais les moyens de s'y soustraire varient a l'infini. Rien n'est plus incertain, rien n'est plus variable que les proportions suivant lesquelles les diverses classes de la société supportent l'impôt" *Ibid.* 566. Remarkable to relate, Say has usually been considered by English and American writers as an exponent of the equal diffusion theory. In reality he was one of its chief opponents. President Walker has already called attention to this. "Political Economy", 3rd ed., §608.

[1] Dans une machine sociale un peu compliquée, l'impôt s'acquitte sous bien des formes inapercues. *Ibid.* p. 562, note.

become lawyers or doctors or clockmakers because their wages have been reduced?" asks Sismondi. "Will the laborers with horny hands and robust bodies all leave their fields and shut themselves up in the factories until agricultural wages have again risen? Beware of this dangerous theory of equilibrium. Beware of thinking it a matter of indifference where the burden is put. Beware of believing that if we tax necessaries of life, the poor will shift the burden on to the rich: A certain equilibrium will indeed be attained in the long run,—but after the most frightful sufferings. Before it is established the failures of the merchants who must abandon their industry will have caused the nation more loss than all the revenue from taxation; the misery and suffering of the laborers will have cost the nation more lives than the most destructive wars. These are the terrible methods of re-establishing the equilibrium. It is this that we see when we abandon those abstractions, which ought never to befog a science that deals with the happiness and welfare of men." In such strong language does Sismondi endeavor to combat the theories of the absolute school.[1] But while Sismondi is so heated in his criticism he does not attempt any constructive work, and says that he is unable to discover any general principles.

Another French writer who treated the subject, but in a manner far less profound than some of his successors, is Garnier. Garnier thinks that *in the long run* taxes fall finally on the consumer. But he maintains that there are many limitations which pre-

[1]Simonde de Sismondi, "Nouveaux Principes d'Economie Polittique", 1819, Book VI, Chap. 6. I quote from the second edition (1827) Vol. II, 219–223.

vent the producer from always shifting the burden to the consumer. Above all he denies that the diffusion of taxes leads to an exemption of the taxpayers. "Division, diffusion and repercussion are unfortunately not the synonyms of evaporation."[1]

A far more important writer is Parieu. Parieu's terminology is very confusing. He is continually confounding the words incidence and shifting, and speaks of the direct and indirect incidence, by which he means ultimate incidence. But his matter is far better than his form. Parieu criticizes those who maintain that all taxes are added to the cost of production and thus distributed to the consumers. This is false and much exaggerated, cries Parieu. Otherwise it would not be worth while to write any books on, or devote any thought to, taxation. All taxes would be alike in their results, the choice between them absolutely indifferent. Parieu maintained that it is possible to lay down one or two general principles, which he formulates in this way:

Taxes remain in first instance on the original taxpayer if the taxable commodity is not susceptible of restriction of supply. In proportion as the supply can be diminished, the tax will be shifted to other classes. If the individual on whom the tax has been shifted is in his turn in a position to restrict his enjoyments, he will neutralize in part the effect of

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[1] Garnier, "Traité de Finances", 1858; p. 36 of 4th ed.(1883). Garnier errs, however, in ascribing this theory to Ricardo. It was the theory of Canard and Thiers, not of Ricardo. It is remarkable that Canard has been almost completely neglected by the French writers themselves.

this shifting, and will shift the tax either back to the original tax payer or on to some other classes.[1]

Parieu applies this leading principle to the various kinds of taxes. And there is no doubt that he here strikes the keynote of what may be called the quantitative or mathematical theory which will be discussed later on. What Parieu says is true, as far as it goes, and, rightly interpreted, furnishes a clue to many of the difficulties of the subject. But Parieu himself devoted only a very few pages to the whole topic and made no effort to get beyond more or less vague generalizations. He concludes that as a general rule "the imposition of taxes, except in the case of taxes on commodities levied wholesale on the producer, cannot be regarded as producing a shifting which completely inverts the first natural effects of the tax. In most cases, the whole or greater part of the tax remains on him who pays it actually or ostensibly in the first or second degree of the incidence."[2] But although he did not grasp the whole

[1] Parieu, "Traité des Impôts." I, 68 (2nd ed. 1866): "L'impôt reste, au moins immédiatement, à la charge de celui qui le paye, si l'objet sur lequel il est assis n'est pas susceptible du réstriction. Il est rejeté en tout ou partie sur d'autres contribuables, si l'objet sur lequel il est assis est susceptible de restriction, et la répercussion de l'impôt est en raison même de la facilité de cette restriction. Si celui sur lequel l'impôt est réflechi est à son tour en état de reserrer la jouissance a l'occasion de laquelle il reçoit le contre-coup de la taxe, il neutralisera en partie l'effêt de la répercussion de l impôt en la rejetant, soit sur le contribuable primitif, soit sur d'autres."

[2] *Ibid.* p. 83 : "L'incidence des taxes ne peut être considerée comme réalisant, si ce n'est pour les denrées frappées en gros chez les producteurs, une réflexion complètement déstructive, des premiers effets naturels de l'imposition. Dans la plupart des cas, tout ou partie de la charge reste réellement imposée sur celui qui la supporte visiblement et ostensiblement dans le premier ou le second degré de son incidence".

subject, and did not even develop his own principle successfully, Parieu deserves more than a passing notice as pointing out one of the most important elements in the solution of the problem.

The other French writers have not materially contributed to the solution of the problem. The work of Du Puynode is very voluminous but not very critical. He makes the whole subject very simple. According to him, taxes on land as well as taxes on houses are ordinarily borne by the owner. "All the imaginary distinctions of Smith and Ricardo are without foundation."[1] Taxes on personal property or profits are always shifted to the consumer. Taxes on wages always rest on the laborer by whom they are paid in first instance.[2] Of course it is very easy to solve the questions in this way.

The volumes of Vignes are important in many other branches of taxation, but his treatment of incidence is not especially noteworthy, except for the fact that he opposes both the theory of "scepticism" and that of "equal diffusion."[3] He deals however, mainly with the special taxes and does not seem well acquainted with the literature. Some of his views are interesting and will be noticed later on.

Finally Leroy-Beaulieu in his comprehensive treatise on public finance rather skims over the general problem. We do, indeed, find a few strong passages scattered through the volume, but only in connection with special points.[4] While admitting that there is

[1] Du Puynode, "De la Monnaie, du Crédit, et de l'Impôt," 1853, II, 175.

[2] *Ibid.* II, pp. 215, 321, 365.

[3] Vignes, "Traité des Impôts en France", 4th ed. by Vergniaud (1880) II, pp. 68, 97, 118, and 173.

[4] Leroy-Beaulieu, "Traité de la Science des Finances", 3rd ed. (1883) I, pp. 180, 413, and 769-771.

a certain element of truth in the "general repercussion" doctrine, he warns his readers against placing too much reliance on it. For anything constructive we search in vain.

In Germany we find far more noteworthy contributions to the subject. The early German writers on public finance, like Soden, Jakob, Fulda, Malchus, Biersack and Murhard may be passed over as comparatively insignificant. They certainly made no definite impression on the course of the theory.[1] One of the early Germans however must be mentioned because of his prominence in other domains of economic science—Von Thünen.

Von Thünen devotes only a small portion of his remarkable work to the problem of taxation, and discusses principally the incidence of the land tax. But he is worth noticing as showing how the equal diffusion theory, logically developed, results in an absurdity. "It would seem then," he says, "that the state can increase its taxes to any conceivable extent, without harming the community, since every active citizen would bear the tax only nominally if he were simply to advance the tax without paying it in last instance. But this remarkable conclusion" adds Thünen "depends on the assumption that after the imposition of the tax the consumption of commodities remains the same. And that is, of course, the weak point in the theory."[2]

[1] Those who desire to study in detail the views of these rather unimportant writers are referred to the books of Kaizl and Falck who deal especially with the German authors.

[2] Es scheint demnach. . . . . dass der Staat die Abgaben bis aufs äusserste erhöhen könne ohne dadurch das Wohl des Ganzen zu gefährden indem von allen seinen thätigen Bürgern kein Einziger dadurch bedrückt wird, weil Jeder die Abgabe nur vorschiesst,

With Rau, however, we come to some positive results. Rau lays down his conclusions in the seven following principles: 1. A tax can be shifted only when it induces the majority of the taxpayers to a uniform conduct, which brings about a change in supply and demand. 2. A tax assessed on the income of an entire class cannot be easily shifted to the vendors of certain goods, because the restriction of the taxpayers' expenses affects different commodities unequally, so that the slight decrease of the demand will often be counterbalanced by a decrease of the supply. 3. Taxes will be shifted most easily on the consumers when all the sellers see themselves equally forced to make good the tax by decreasing supply, as in the case of customs duties. 4. Taxes on classes with fixed incomes, like public officials, cannot possibly be shifted. 5. Taxes which are not assessed according to the quantity of goods for sale are less easily shifted than others. 6. In taxes on rent, the source of profits, wages or profits the important consideration is whether the tax-payer can escape the tax through a change in investments. 7. The transference of taxation cannot excuse an unjust system of assessment, because (*a*) the shifting is often more apparent than real, (*b*) if only a few taxpayers are assessed too high or too low, prices will not be affected, (*c*) in the interval many hardships are sure to ensue, and (*d*)

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nicht selbst bezahlt. . . . . Die Schlüsse wodurch wir dieses sehr auffallende Resultat erhalten, beruhen auf der Voraussetzung dass nach der Einführung der Abgabe die Consumtion dieselbe bleibt". v. Thünen, "Der isolirte Staat". I (3rd ed. 1875), 337. The first edition was published in 1826. *Cf.* the French translation by Laverrière: "Recherches sur l'influence que le prix des grains, la richesse du sol et les impôts exercent sur les systèmes de culture", (1851) p. 292.

even a complete shifting of a high tax is not without bad results because it often diminishes both production and consumption.[1] These principles of Rau are very far removed from the absolute theories of Ricardo, and they are of considerable help in the investigation of special problems, as we shall see later on.

More important, and in some respects the most suggestive of the works hitherto considered, is the book of v. Hock. Hock was the first to analyze and define the various kinds of shiftings—the shifting forwards, the shifting backwards and the shifting off, terms to which allusion is made in the introduction.[2] He maintains that from the standpoint of the taxpayer the tax must always be a part (1) of the cost of production of the commodity taxed, (2) of the general business expenses, (3) of the cost of subsistence, or (4) a burden on the net revenue or income. Examples would be, respectively, a tax on the manufacture of spirits, a license or business tax, a poll or house tax, and an income tax. In general, taxes of class one, class two, and of class three in so far as the necessaries of life are concerned, are virtually additions

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[1]Rau, "Grundsäte der Finanzwissenschaft," 1832; 5th ed. (1864), III, 412-417. The 6th point reads as follows: "Insbesondere kommt es bei Steuern, die den Ertrag einer einzelnen Güterquelle zu treffen bestimmt sind, darauf an, ob der Besteuerte durch eine anderweitige Verwendung jener Quelle oder andere Einrichtungen der Auflage ausweichen kann. Dies wird in vielen Fällen durch die Beschaffenheit des werbenden Vermögens verhindert. . . . . Desshalb bleiben die meisten Steuern auf den Renten des werbenden Vermögens liegen, die auch wirklich den grössten Theil des steuerbaren Einkommens ausmachen, oder werden noch auf sie hinübergewälzt".

[2]He termed these: Fortwälzung, Ruckwälzung and Abwälzung—all of them modes of Ueberwälzung or shifting.

to the cost of production and will thus tend to be shifted to the consumer. But there are many exceptions to the general rule, which may be summed up as follows:[1] (A) There will be no shifting *in general* and *for a long period* when the tax is so high as to produce a decrease of demand, or a substitution of inferior products on the part of the consumer. (B) There will be no shifting *temporarily* when the state of the market changes so that the price of the articles falls below the price before the tax was imposed. (C) The exceptions to the shifting of tax on necessaries of life are far more frequent and dangerous to the laborer, than the above exceptions to the producer. For wages frequently vary, and an increase of price in the necessaries of life joined with a low rate of wages has the most lamentable results.

While Hock, therefore, accepts in general the cost of production theory of taxation, he is by no means a follower of Canard or Thiers. He confesses that in the long run the shifting of some taxes will produce an equilibrium,—only it is not a fixed equilibrium, but one that is continually disturbed by the conditions of the market, and completely overthrown by every important economic reform. Above all it is not to be assumed that this equilibrium is necessarily just or even beneficial from the economic point of view. For under certain conditions the shifting of taxation may increase, and not decrease, the original injustice. The optimistic theory of diffusion is utterly untenable.[2]

[1] Hock, "Die öffentlichen Abgaben and Schulden", 1863, 91-96.

[2] "Es ist allerdings wahr, dass die Überwälzung der Steuern zulezt eine Ausgleichung zur Folge habe, allein das hierdurch hergestellte Gleichgewicht ist ein labiles, das jeden Augenblick durch die Schwankungen des Marktes gestört und durch jede tiefer greifende wirth-

Prince-Smith seeks to solve the problem in somewhat the same way. Prince-Smith ridicules the diffusion theory which virtually maintains that the burden of taxation, like the ball in the game of shuttlecock and battledoor, is continually thrown from hand to hand, and always remains suspended in the air without ever falling on anybody.[1] On the contrary the shifting of taxation depends on certain conditions. It can take place only through increase of price. But the increase of price can be due only to increased demand or decreased supply. The producer cannot increase the demand. Therefore he must reduce the supply. Apart from the question of outlets in international trade, this is possible only through limitation of production, i. e. transfer of capital and labor to other occupations. The whole problem of shifting thus reduces itself to the question: which is more injurious—to bear the tax without shifting, or to suffer through the limitation of production. In general a tax will be shifted only when the transfer brings in more than it costs. In other words the whole question of incidence is, according to Prince-Smith, simply a question of calculation. He applies his theory to practical cases and thinks that the land and house tax cannot be shifted, that the indirect taxes or taxes on wages can be shifted only through the bankruptcy of the weakest; —and bankruptcy of the laborer means starvation

schaftliche Reform ganz aufgehoben wird. . . . . Es kann unter gewissen politischen und commerciellen Vorbedingungen die Steuer durch fortgesetzte Ueberwälzungen eben so leicht ungerechter und schädlicher werden als das Gegentheil". *Ibid.* 108–109.

[1] Prince-Smith, "Ueber die Abwälzung", in *Vierteljahrschrift für Volkswirthschaft und Kulturgeschichte*, XIII (1886), 130. Also reprinted in his "Gesammelte Schriften", 1877, I, 43–64.

vent the producer from always shifting the burden to the consumer. Above all he denies that the diffusion of taxes leads to an exemption of the taxpayers. "Division, diffusion and repercussion are unfortunately not the synonyms of evaporation."[1]

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a certain element of truth in the "general repercussion" doctrine, he warns his readers against placing too much reliance on it. For anything constructive we search in vain.

In Germany we find far more noteworthy contributions to the subject. The early German writers on public finance, like Soden, Jakob, Fulda, Malchus, Biersack and Murhard may be passed over as comparatively insignificant. They certainly made no definite impression on the course of the theory.[1] One of the early Germans however must be mentioned because of his prominence in other domains of economic science—Von Thünen.

Von Thünen devotes only a small portion of his remarkable work to the problem of taxation, and discusses principally the incidence of the land tax. But he is worth noticing as showing how the equal diffusion theory, logically developed, results in an absurdity. "It would seem then," he says, "that the state can increase its taxes to any conceivable extent, without harming the community, since every active citizen would bear the tax only nominally if he were simply to advance the tax without paying it in last instance. But this remarkable conclusion" adds Thünen "depends on the assumption that after the imposition of the tax the consumption of commodities remains the same. And that is, of course, the weak point in the theory."[2]

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[1]Those who desire to study in detail the views of these rather unimportant writers are referred to the books of Kaizl and Falck who deal especially with the German authors.

[2]Es scheint demnach. . . . . dass der Staat die Abgaben bis aufs aüsserste erhöhen könne ohne dadurch das Wohl des Ganzen zu gefährden indem von allen seinen thätigen Bürgern kein Einziger dadurch bedrückt wird, weil Jeder die Abgabe nur vorschiesst,

With Rau, however, we come to some positive results. Rau lays down his conclusions in the seven following principles: 1. A tax can be shifted only when it induces the majority of the taxpayers to a uniform conduct, which brings about a change in supply and demand. 2. A tax assessed on the income of an entire class cannot be easily shifted to the vendors of certain goods, because the restriction of the taxpayers' expenses affects different commodities unequally, so that the slight decrease of the demand will often be counterbalanced by a decrease of the supply. 3. Taxes will be shifted most easily on the consumers when all the sellers see themselves equally forced to make good the tax by decreasing supply, as in the case of customs duties. 4. Taxes on classes with fixed incomes, like public officials, cannot possibly be shifted. 5. Taxes which are not assessed according to the quantity of goods for sale are less easily shifted than others. 6. In taxes on rent, the source of profits, wages or profits the important consideration is whether the tax-payer can escape the tax through a change in investments. 7. The transference of taxation cannot excuse an unjust system of assessment, because (*a*) the shifting is often more apparent than real, (*b*) if only a few taxpayers are assessed too high or too low, prices will not be affected, (*c*) in the interval many hardships are sure to ensue, and (*d*)

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nicht selbst bezahlt. . . . . Die Schlüsse wodurch wir dieses sehr auffallende Resultat erhalten, beruhen auf der Voraussetzung dass nach der Einführung der Abgabe die Consumtion dieselbe bleibt". v. Thünen, "Der isolirte Staat". I (3rd ed. 1875), 337. The first edition was published in 1826. *Cf.* the French translation by Laverrière: "Recherches sur l'influence que le prix des grains, la richesse du sol et les impôts exercent sur les systèmes de culture", (1851) p. 292.

even a complete shifting of a high tax is not without bad results because it often diminishes both production and consumption.[1] These principles of Rau are very far removed from the absolute theories of Ricardo, and they are of considerable help in the investigation of special problems, as we shall see later on.

More important, and in some respects the most suggestive of the works hitherto considered, is the book of v. Hock. Hock was the first to analyze and define the various kinds of shiftings—the shifting forwards, the shifting backwards and the shifting off, terms to which allusion is made in the introduction.[2] He maintains that from the standpoint of the taxpayer the tax must always be a part (1) of the cost of production of the commodity taxed, (2) of the general business expenses, (3) of the cost of subsistence, or (4) a burden on the net revenue or income. Examples would be, respectively, a tax on the manufacture of spirits, a license or business tax, a poll or house tax, and an income tax. In general, taxes of class one, class two, and of class three in so far as the necessaries of life are concerned, are virtually additions

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[1]Rau, "Grundsäte der Finanzwissenschaft," 1832; 5th ed. (1864), III, 412–417. The 6th point reads as follows: "Insbesondere kommt es bei Steuern, die den Ertrag einer einzelnen Güterquelle zu treffen bestimmt sind, darauf an, ob der Besteuerte durch eine anderweitige Verwendung jener Quelle oder andere Einrichtungen der Auflage ausweichen kann. Dies wird in vielen Fällen durch die Beschaffenheit des werbenden Vermögens verhindert. . . . . Desshalb bleiben die meisten Steuern auf den Renten des werbenden Vermögens liegen, die auch wirklich den grösten Theil des steuerbaren Einkommens ausmachen, oder werden noch auf sie hinübergewälzt".

[2]He termed these: Fortwälzung, Ruckwälzung and Abwälzung—all of them modes of Ueberwälzung or shifting.

to the cost of production and will thus tend to be shifted to the consumer. But there are many exceptions to the general rule, which may be summed up as follows:[1] (A) There will be no shifting *in general* and *for a long period* when the tax is so high as to produce a decrease of demand, or a substitution of inferior products on the part of the consumer. (B) There will be no shifting *temporarily* when the state of the market changes so that the price of the articles falls below the price before the tax was imposed. (C) The exceptions to the shifting of tax on necessaries of life are far more frequent and dangerous to the laborer, than the above exceptions to the producer. For wages frequently vary, and an increase of price in the necessaries of life joined with a low rate of wages has the most lamentable results.

While Hock, therefore, accepts in general the cost of production theory of taxation, he is by no means a follower of Canard or Thiers. He confesses that in the long run the shifting of some taxes will produce an equilibrium,—only it is not a fixed equilibrium, but one that is continually disturbed by the conditions of the market, and completely overthrown by every important economic reform. Above all it is not to be assumed that this equilibrium is necessarily just or even beneficial from the economic point of view. For under certain conditions the shifting of taxation may increase, and not decrease, the original injustice. The optimistic theory of diffusion is utterly untenable.[2]

[2]Hock, "Die öffentlichen Abgaben and Schulden", 1863, 91-96.

[1]"Es ist allerdings wahr, dass die Uberwälzung der Steuern zulezt eine Ausgleichung zur Folge habe, allein das hierdurch hergestellte Gleichgewicht ist ein labiles, das jeden Augenblick durch die Schwankungen des Marktes gestört und durch jede tiefer greifende wirth-

Prince-Smith seeks to solve the problem in somewhat the same way. Prince-Smith ridicules the diffusion theory which virtually maintains that the burden of taxation, like the ball in the game of shuttlecock and battledoor, is continually thrown from hand to hand, and always remains suspended in the air without ever falling on anybody.[1] On the contrary the shifting of taxation depends on certain conditions. It can take place only through increase of price. But the increase of price can be due only to increased demand or decreased supply. The producer cannot increase the demand. Therefore he must reduce the supply. Apart from the question of outlets in international trade, this is possible only through limitation of production, i. e. transfer of capital and labor to other occupations. The whole problem of shifting thus reduces itself to the question: which is more injurious—to bear the tax without shifting, or to suffer through the limitation of production. In general a tax will be shifted only when the transfer brings in more than it costs. In other words the whole question of incidence is, according to Prince-Smith, simply a question of calculation. He applies his theory to practical cases and thinks that the land and house tax cannot be shifted, that the indirect taxes or taxes on wages can be shifted only through the bankruptcy of the weakest; —and bankruptcy of the laborer means starvation

schaftliche Reform ganz aufgehoben wird. . . . . Es kann unter gewissen politischen und commerciellen Vorbedingungen die Steuer durch fortgesetzte Ueberwälzungen eben so leicht ungerechter und schädlicher werden als das Gegentheil". *Ibid.* 108-109.

[1] Prince-Smith, "Ueber die Abwälzung", in *Vierteljahrschrift für Volkswirthschaft und Kulturgeschichte*, XIII (1886), 130. Also reprinted in his "Gesammelte Schriften", 1877, I, 43-64.

and death. As a protest against the absolute and diffusion theories Prince-Smith makes a strong case, although some of his own positions are not always tenable.

The most recent German writers on public finance have, with few exceptions, done very little to advance the investigation. Roscher follows in the main the exposition of the English school.[1] Schäffle deals chiefly with the question of capitalization, and has already been referred to.[2] Wagner, even in his last edition, bases his exposition primarily on the works of Rau and Hock, and does not really get beyond them.[3] Cohn contents himself with a few vague generalizations which are of extremely little use.[4] In fact, the recent German literature is significant mainly for the fact that it attempts, sometimes very successfully, to glide over and evade the difficulties of the problem. In so far as any positive views are to be found in the books of Kaizl and Falck mentioned above, they will receive due attention later on.

The English writers who have not yet been mentioned, may be passed over with a few words. Richard Jones was one of the first to deny the Ricardian doctrine of incidence, as he was the first to dispute Ricardo's theory of distribution. He confined himself almost exclusively to the tax on wages or on consumable commodities. Jones maintains that it is impossible to tell beforehand the ultimate incidence of a tax on wages. It depends on their effect upon the movements of population. If the tax be laid on

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[1] Roscher, "Finanzwissenschaft", 1886, §§38–43.
[2] Schäffle, "Steuerpolitik", 1880, 173–192.
[3] Wagner, "Finanzwissenschaft", II, (2nd ed. 1890), 332-372.
[4] Cohn, "Finanzwissenschaft", 1889, 384–311.

wages under circumstances in which it would not affect the movement of population, but would be met by a sacrifice of secondary gratifications the tax would not be shifted. Only in the reverse case would the tax be shifted from wages to profits.[1]

Already before Jones, David Buchanan had controverted some of Adam Smith's doctrines on incidence. He takes exception to the distinction between the ground rent and the building rent in the house tax.[2] But above all he opposes the view that a tax on labor will produce a corresponding rise in wages. If wages were always at the bare minimum point, then indeed the doctrine might be true. But "while the wages of labor affords comforts and even luxuries, the laborer will always possess a fund for the payment of taxes". . . . "All taxes on labor or on such commodities as the laborer consumes take effect by abridging his comforts. They increase the hardships and tend generally to degrade the condition of the laboring classes."[3] And we have seen that the argument of Buchanan induced Ricardo to make a qualification of his rigid theory.[4]

James Mill is, on the whole, a follower of Ricardo, although he makes a distinction in some points. Thus Mill maintains that a tax on rent falls on rent, but a tax on produce or on farmers' profits is shifted to the consumer. So also a tax on profits of stock

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[1] Jones, Tract on the incidence of taxes on commodities that are consumed by the laborer. In "Lectures and Tracts on Political Economy", 1858, 143 and 277.

[2] David Buchanan, Edition of Adam Smith's "Wealth of Nations", III, (2nd ed. 1817), 309.

[3] *Ibid.* 338–339; and Buchanan, "Observations on the Subjects Treated of in Dr. Smith's Inquiry", etc. (2nd ed. 1817), 59–64.

[4] *Supra.*, p. 37.

will fall on profits. On the other hand Mill accedes to Ricardo's theory of the tax on wages only on the assumption that wages are at the lowest point to which they can be reduced. Otherwise, he thinks, a tax on wages will not be shifted to profits.[1]

Senior confines his observations to a few points only. He agrees that taxes on manufactured commodities raise the price, generally by a sum exceeding the amount of the tax. But he takes issue with Ricardo with regard to a tax on agricultural produce. Senior maintains that while the immediate effect of such a land tax is to raise price, its ultimate effect is to diminish the consumption and production of raw produce but to leave its price unaffected. Tithes will therefore not be shifted to the consumers.[2]

John Stuart Mill keeps, in the main lines, to the arguments of his predecessors. He assumes perfectly free competition, and the complete transferability of capital; and on this builds up the whole superstructure. He also follows Ricardo except in three points. In the first place he accepts Senior's emendation of the doctrine of tithes, confessing that in the long run the incidence is on the landowner, and not the consumer. Secondly he accepts the view of his father as to the incidence of a tax on wages. Thirdly he analyzes more closely the incidence of taxes on exports and imports.[3]

McCulloch displays a little more independence only in one point. A special tax on profits will not necessarily raise prices, as Ricardo has said, but may

[1]James Mill, "Elements of Political Economy", (3rd ed. 1844), Chap. iv, Sec. v–xii.

[2]Senior, "Political Economy", (6th ed. 1872), 120–124.

[3]J. S. Mill, "Principles", Bk. V, Chap. iv, §4; Chap. iii. §4 and Chap. iv, §6.

lead to a reduction of cost, instead of being shifted to the consumer. McCulloch points out that the producer will endeavor to meet the pressure of the tax and thus defeat it by exerting greater skill and industry, by an increased facility of production or a saving of expense, so that the tax would not continue to fall on the producer; nor again would it fall on the consumer.[1] In reality this doctrine of McCulloch explains, not any process of shifting, but what we termed in the introduction, the "evasion" of taxation which is a very different thing. This idea of evasion may thus be said to have been introduced into scientific discussion by McCulloch.

The treatment of the subject by Fawcett is remarkable first for its exaggeration of some of the mistakes of the older economists, as e. g. the contention that a tax on commodities raises prices far beyond the amount of the tax, and secondly for the very confused ideas on the incidence of local taxation.[2] As both these points will be treated of fully later on, we may omit them here.

An able criticism of the older absolute theories is to be found in the work of Cliffe-Leslie. Cliffe-Leslie pointed out that the older conclusions were frequently too rigid. "The theoretical canons commonly applied to determine the incidence of taxes . . . . are often misleading. They furnish us simply with inferences from ideal 'average' or 'natural' rates of wages and profit, respecting the 'tendencies' of taxes 'in the long run' and in the ab-

[1] McCulloch, "A Treatise on the Principles and Practical Influence of Taxation and the Funding System", (3rd ed. 1863), 72.

[2] Fawcett, "Manual of Political Economy", (6th ed. 1883), esp. 551 and 613.

sence of disturbing causes.' But taxes are paid immediately, under the real conditions of life, and out of the actual wages or profits or other funds of individuals, not out of hypotheses or abstractions in the minds of economists".[1] Cliffe-Leslie called attention to the effects of what has been termed "economic friction" in neutralizing the working of supposed immutable laws and in producing practical effects the very reverse of those assumed. He confined his arguments, however, chiefly to a few taxes, and his own constructive work is not very elaborate. His special doctrines will be noticed below.

VIII.—The Negative or Agnostic Theory.

The ablest expounder of this theory is Adolf Held. Held's discussion of incidence is based on a denial of cost of production as a condition of normal profits.[2] He follows Schäffle in generalizing the rent conception, and is in so far a forerunner of the recent English and American writers who adopt the same idea. This conception, applied to profits, results in the theory of greatest cost and in the explanation of profits as the difference between greatest cost and market price. Held however does not draw the correct conclusions from his theory. He was an acute thinker and a man of the noblest ideals; but he became so imbued with the idea that all the old political economy was worthless that his strictures are as often false as true. Like so many of the younger Germans

[1] T. E. Cliffe-Leslie. The Incidence of Imperial and Local Taxation on the Working Classes. In his "Essays in Political and Moral Philosophy", 1879, 192.

[2] Held, "Zur Lehre von der Ueberwälzung der Steuern". *Tübinger Zeitschrift fur die gesammte Staatswissenschaft*, 1868, 422–495.

he was stronger in criticism than in construction; and his own positive contributions to pure theory are not very profound. His whole treatment rests on a misunderstanding, which sometimes almost seems a wilful perversion, of the doctrine of cost of production. It would not repay us to discuss all his points in detail, as even the Germans themselves, who were at one time deeply impressed with his views, have now repudiated his extreme doctrines. His conclusions are chiefly negative, and may be summed up in the confession that we can know nothing about the whole subject of incidence.[1] From Held therefore we can learn nothing positive.

IX.—The Socialistic Theory of Incidence.

It is worth while also to mention the socialistic theory of incidence, especially as developed by Lassalle. Lassalle devotes himself primarily to the consideration of the laborer's interests. He calls indirect taxes all those which are not assessed directly on individual income or property and includes under the heading indirect taxes not only all taxes on consumption but also land and business taxes. All these indirect taxes fall ultimately on the poorer classes of society, because the German laborer has not sunk quite so low as Irish workman or Indian ryot, and because a little more can be taken from his wages before reducing him to starvation. Smith and Ricardo, who are correct enough in their theory of the incidence of taxes on produce, are mistaken here,

[1] *Cf.* as a sample the following conclusion: "Ueber die Abwälzung der Kapitalzinssteuer lässt sich also gar nichts sagen, sie lässt sich nicht einmal allgemein leugnen." *Ibid.* 481.

says Lassalle. For it is a scientific fact that wages are always the last to rise in price as compared with other commodities. It is therefore the laborer who bears all the so-called indirect taxes,—i. e. the major part of all taxes.[1]

X.—The Quantitative or Mathematical Theory.

The authors who have in some respects, and within a limited field, done the best work in the study of incidence of taxation are precisely those who have hitherto generally been overlooked.[2] They may be called for lack of a better name the quantitative or mathematical school.

Of these by all means the ablest and most suggestive is Cournot. Cournot started out from the assumption that the whole theory of incidence of taxation is an integral and a necessary part of the general theory of value. In his earliest and most profound work,[3] in which he first laid down so many of the principles which to-day form the chief part of the so-called new doctrines in pure economics, he attempted to apply his theory of value to the study of taxation. He studied commodities under the regime of monopoly and of competition respectively, and applied the methods of differential calculus to ascertain what influence an increase in the supply price of any commodity—as e. g. a tax—would have

[1] Lassalle. "Die indirekte Steuer and die Lage der arbeitenden Klassen", 1863, pp. 9, 36, 41, *etc.*

[2] Not one of the recent German or French elaborate works in finance refers to a single member of this school. Kaizl and Falck also neglect them completely.

[3] Cournot, "Recherches sur les Principes Mathématiques de la Théorie des Richesses", 1838, Chaps. 6 and 8.

on the producer as well the consumer. He analyzed the laws of constant, increasing and diminishing returns in their relations to this influence, and he came to some important conclusions which will be discussed later on in the body of these articles.

Nevertheless, while it is undeniably a relief to read the clear cut and precise doctrines of Cournot as compared with the vague and misty generalizations of many writers of the eclectic school, Cournot's study of incidence is by no means adequate. It is good, as far as it goes,—but it does not go far enough. Cournot's whole study is practically a discussion of the incidence of a tax on commodities,—or as we would say of a certain class of indirect taxes. He fails to remember that there are other taxes besides those on commodities and profits; and that to regard a tax as raising the normal supply price or cost of production of a commodity by no means exhausts the possibilities of the case. It is true indeed that in a later work[1] he attempts to discuss the incidence of taxation in less mathematical form, and to extend the discussion to other taxes. But the attempt is far from successful. In certain cases, as e. g. the tax on buildings, his views are positively erroneous. Whole classes of taxes are completely omitted—like the tax on wages, etc.,—and no attempt is made to lay down any general conclusions. But in so far as the study of indirect taxation is concerned, Cournot's book has never yet been surpassed.

Some of Cournot's ideas were further developed by another French mathematician, Fauveau. Fauveau, however, added practically nothing except a series of elaborate mathematical formulae, and he is

[1] "Principes de la Théorie des Richesses", 1863, Book III, Chap. 8.

to be noticed in the main only because of his energetic opposition to the optimistic theory. "The diffusion of taxes", says he, "cannot render taxes proportional any more than the diffusion of light makes a room equally illuminated in every part whatever be the position of the candle."[1] And Fauveau concludes rather sadly that it is quite as easy for an originally equal tax to become unequal in its operation, as for an originally unequal tax to become equal in its operation.

Many years later an attempt of a similar nature was made by an English mathematician, Fleeming Jenkin. Jenkin's essay, however, is exceedingly short, and deals mainly with what he calls taxes on trade, but what are virtually taxes on commodities. Although he evidently knew nothing of Cournot, Jenkin also made use of diagrams based on a combination of the demand curve and the supply curve. He concludes that "the ratio in which a tax on commodities falls on sellers and buyers is simply the ratio of the diminution of price obtained by the sellers to the increase of price paid by the buyers".[2] In his treatment of taxes on land and on houses Jenkin fails to make any of the qualifications which alone can give the results practically true in every-day life. And above all he entirely omits other taxes

[1] G. Fauveau, "Considérations Mathématiques sur la Théorie de l'Impôt", Paris, 1864, 58. "La diffusion de l'impôt nous parait-il, ne peut pas le rendre en définitive proportionnel pas plus que la diffusion de la lumière ne fait qu'une chambre est éclaircie également en tous ses points quel que soit l'endroit de cette chambre où l'on a placé une bougie".

[2] Fleeming Jenkin, "On the Principles which Regulate the Incidence of Taxes." Proceedings of the Royal Society of Edinburgh, Session 1871-72, 618-631. *Cf.* also his "Recess Studies" for his Demand and Supply schedule.

and makes no attempt to give general laws of incidence. But in regard to the special point of the influence of taxes on cost Jenkins remarks are suggestive and will be considered later on.

Finally in 1882 a young Italian economist, Pantaleoni, devoted a whole volume to the study of incidence of taxation.[1] He, also, was ignorant of the work of Cournot; but attempted to base his whole theory on the doctrine of cost of production worked out on arithmetical lines. Pantaleoni devotes over half the work to what is really a part of pure economic theory—the doctrine of value—and then proceeds to discuss the incidence of some of the chief separate taxes. It is the most comprehensive work ever published on the general subject, although, strange to say, it has hitherto never received any consideration outside of Italy itself. While there is a great deal of acute and original thought in the monograph, the work suffers severely from the fact that it attempts to build up the whole edifice of incidence on economic theories which are either obsolete, or when new, often erroneous. Thus his whole treatment of the tax on profits is rendered almost worthless by the erroneous doctrines of profits that he espouses. So again his treatment of the land and house tax is neither exact nor correct. It may in fact be affirmed that many of the doctrines upheld in the work no longer represent the views of the author to-day.[2] We omit in this place a detailed state-

[1] Maffeo Pantaleoni, "Teoria della Traslazione dei Tributi. Definizioni, Dinamica e Ubiquita della Traslazione". Rome, 1882.

[2] In answer to a recent letter of the present writer stating that he did not agree with several of the doctrines laid down in the work, Prof. Pantaleoni replied: "I do not agree with myself", and intimated that his present views differ from those expressed in the book.

ment of the special doctrines, as we shall have occasion to revert to them constantly in the following essays, for the purpose both of approval and of dissent. With all its faults Pantaleoni's work contains by all means the best existing treatment of the incidence of taxation, as a matter of pure theory.

Of the recent so-called exact or mathematical school in political economy scarcely any one has made any applications to the theory of incidence of taxation. Neither Jevons nor any of the Austrian writers like Menger, Wieser, Böhm-Bawerk or Sax has made use of his theory of value to explain the doctrines of incidence. Walras, indeed, refers to the works of Cournot and Dupuit in relation to the theory of monopoly taxes, but his own treatment is too simple a one. According to Walras a tax on land, owing to the theory of the rent charge, rests only on the original owners. A tax on wages rests on the wage-earner, because the theory of capitalization is not applicable here. A tax on what he calls artificial capital or interest is nothing but an indirect tax on consumption because it is inevitably shifted. Taxation can really hit only "natural wealth", i. e. either agricultural rent or wages.[1]

Among English writers Marshall is the only one who has called attention to the connection between the doctrine of incidence and the general law of value.[2] He follows Cournot very closely indeed, but has enriched the discussion with some interesting diagrams. Everything that was said above by way

[1] Léon Walras, "Théorie Critique de l'Impôt", 1861, 31–57. In his "Eléments d'Economie Politique Pure", M. Walras seems to have altered his opinion, but still clings to the rent charge theory. 2nd ed. (1889), 506–520.

[2] Marshall, "Principles of Economics", 442, note 2.

of criticism of Cournot may be repeated as equally true of Marshall. However Marshall's whole treatment of incidence is very fragmentary and is confined to one particular point, as will be seen hereafter. But it must be remembered that Marshall expressly reserves his study of incidence for a future volume.

The most recent work on the topic is by Conigliani.[1] But Conigliani devotes himself primarily to the wider subject of the general effects of taxation. And in so far as he speaks of shifting and incidence, he avowedly attempts to give only the "abstract, general theory," apart from any application to any existing systems of taxes, and apart from any "exceptional, transitory or irregular" phenomena. The result of such a method of study, based on the recent Austrian theories of subjective value, is partly a series of the baldest truisms in which we cannot, even with the best of will, discern a single advance in theory, and partly a statement of tendencies couched in such very general terms as to be of virtually no use in the elucidation of practical problems. We include Conigliani under the mathematical school only because he himself professes to be among its followers. But it would be fruitless to enter into the details of his work. It is of a far different calibre from those of Cournot or Pantaleoni. We give as an example his final conclusion: "A tax of given intensity and extension, falls with the less intensity and extension on individual economies, and produces a less unequal effect on economic society, in proportion as society is more developed. The incidence, when it does not have a considerable extension or intensity,

[1] C. A. Conigliani, "Teoria generale degli Effetti Economici delle Imposte. Saggio di Economia Pura". Milan, 1890.

assumes the less easily the character of a change in activity, in proportion as society is more advanced. Finally the change in consumption will take place with greater disturbance of the equilibrium in the degree of the satisfaction of wants, and therefore with less change in the internal arrangement of individual economy, in proportion as the social environment in which these changes of taxation take place is more advanced".[1] And this Conigliani tells us "completely exhausts the general theoretic problem of the effects of taxation". If this were true we might feel tempted to say that we had better leave unstudied "the general theoretic problems."

[1] "Un 'imposta di data intensità ed estensione, è tanto meno intensamente ed estesamente incisa su alcune economie, e lo è tanto meno disegualmente sulla società economica complessiva quanto piu questa è evoluta. L'incidenza poi, quando essa non abbia una considerevole estensione ed intensità, assume tanto meno facilmente il carattere di un mutamento nell' attività, quanto più la società é progredita. Infine il mutamento nel consumo si avvera con tanto maggiore violazione dell' equilibrio dei gradi di soddisfazione dei bisogni e quindi con tanto minore alterazione dell' ordinamento interno dell' economia individuale, quanto più progredito e l'ambiente sociale in cui si immagini il mutamento di imposta." p. 276.

CHAPTER II.

TAXES ON AGRICULTURAL LAND.

The assertion is frequently made that the American farmers are taxed out of all proportion to their ability to pay. This is due chiefly to the fact that they have to assume to a large extent the burdens of the other taxpayers. Outside of the rural districts the great mass of personal property consists of intangible personalty, which as a rule escapes taxation almost completely.[1] In the rural districts, on the other hand, the great mass of personalty consists of visible tangible property used by an agricultural community. The country landowner who is generally assessed also on his visible personalty must thus pay over and above his just proportion of the public dues an additional share which ought to have been assumed by the owners of intangible personalty. What is a real property tax in the rest of the state becomes a general property tax for the farmer.

The force of this contention is sought to be weakened by the commonly accepted doctrine that the tax on the farmers' property is diffused throughout the community. The farmer will add the tax to the products of his farm, and will in this manner recoup himself for the original outlay. The tax will be shifted, so runs the argument, from the producer to the consumer; and since everyone is a consumer, the

[1] Cf. my article on "The General Property Tax". *Political Science Quarterly*, Vol. V, 24.

cardo's doctrines require some qualification in order to fit them to the actual conditions of every-day life.

Theoretically there may be five different kinds of land taxes:

I.—Tax on economic rent.
II.—Uniform tax according to quantity or quality.
III.—Tax on gross produce, e. g. a tithe.
IV.—Tax on agricultural profits.
V.—Tax on the property or selling value.[1]

I.—Tax on Economic Rent.

If land be taxed according to its pure rent, virtually all writers since Ricardo area greed that the tax will fall wholly on the landowner, and that it cannot be shifted to any other class, whether tenant-farmer or consumer. Since land on the margin of cultivation pays no rent in the economic sense, and since the no-rent land fixes the price of all produce, a tax on rent cannot affect the price of agricultural produce and can therefore not be shifted. This point is so universally accepted as to require no further discussion.[2]

But a tax on pure rent is very rare. The more difficult questions arise when a tax is assessed so as to

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tion, published in Madrid, 1848. An excellent French translation was made by L. Galibert under the title "Cours éclectique d'économie politique écrit en Espagnol", and published in three volumes in Paris, 1833. Pantaleoni is the only writer that has referred to Florez-Estrada, but he makes no efforts to qualify any of the conclusions.

[1]Florez Estrada makes a slightly different division. See his work, "Del Consumo de la Riqueza", Cap. v., De la Contribucion sobre la propriedad territorial, II, 328.

[2]Ricardo, "Principles of Political Economy and Taxation", Chap. 10.

on consumption alone would therefore fall with increasingly crushing force on all those classes whose expenses swallow up almost their entire income, or perhaps even encroach on their capital. I do not of course mean to argue against the advisability of taxes on consumption as a part, and because of certain other advantages even a desirable and necessary part, of a tax system. My contention is directed against expenditure as the theoretical basis of all taxation. A tax on real estate only is, according to this doctrine of incidence, a tax on expenditure. It reaches only the poorer classes of society and exempts in ever increasing proportion the earnings or the property of the wealthy. And in so far as the farmers themselves belonged to the poorer classes they would bear a disproportionate share of the burdens. Thus the single tax on real estate just because of its supposed diffusion throughout the community would become the most unjust and oppressive of all taxes.

But in reality, of course, the whole supposition is incorrect. There is no such general shifting. The tax on the rural landowner will often tend to stay where it is put.

The question of the incidence of the land tax presents comparatively few difficulties. Since the time of Ricardo it has been treated frequently and, on the whole, with success. But it is remarkable that the writer who has discussed the subject with the greatest clearness and subtlety from the abstract view—the Spanish economist, Florez-Estrada—should have remained practically unknown to this day.[1] Nevertheless both Florez-Estrada's and Ri-

[1] D. Alvaro Florez Estrada, "Curso di Economia Politica". 2 vols. Published originally in London, 1828. I quote from the sixth edi-

but owing to a difference of fertility yielding respectively ten, twenty and thirty bushels to the acre; and let us further suppose that this quality of wheat was worth fifty cents a bushel. Tract A would thus yield five dollars an acre, tract B ten dollars and tract C fifteen dollars. If a tax of fifty cents an acre was imposed on all the land, the owner of tract A would have to obtain for his produce $5.50 or cease cultivating. But if the price of ten bushels were $5.50, the price of the twenty bushels produced on tract B would have to be $11.00, and of the thirty bushels on tract C $16.50, since the price of the bushel would always be fixed by the expenses of tract A, i. e. 55 cents. The owner of tract B would thus pay in taxes 50 cents more than before, but would obtain from the public one dollar more than before, that is he would make the consumer pay to him a sum over and above the amount of the tax. So again the owner of tract C would pay in taxes 50 cents more than before, but would obtain from the public one dollar and a half more than before. A uniform tax on quantity therefore inevitably takes out of the pockets of the consumer more than it puts into the hands of the tax collector.[1]

The second case would occur when the tax was not a uniform tax according to quantity, but a tax per acre graded into several classes according to quality, as for instance in Kentucky and Connecticut during colonial times.

If *e. g.* in the above case the tax per acre on grade A were 50 cents, on grade B $1.00, and on grade C $1.50, then not only would the price of wheat remain as before at 55 cents per bushel, but

[1] Ricardo had already called attention to this in Chapter xii.

the amount of taxes paid by the landowners would exactly equal the increased price obtained from the consumers. Hence, whenever a land tax is graded so as to follow with precision the differential advantages of production, the tax will be shifted entirely to the consumers, without causing them any additional loss. In practice, of course, such gradation of the tax has always been very rough, so that it is very unlikely that the exact amount of the tax and no more is shifted to the consumers.

The third case—that of division of the tax between producer and consumer—will arise when the graded acreage tax is imposed in such a manner that the progression of the tax exceeds the augmentation in price. If *e. g.* grade A were assessed at 50 cents, grade B at $1.25, and grade C at $2, the consumers would still have to pay more than before the imposition of the tax, but the owners of grades B and C would make less profits than before. The degree in which landowner and consumer would share the tax would depend entirely on the rate of the graduation or progression of the tax.

Finally, the fourth case—that of the tax resting entirely on the landowner—would occur on the supposition (which manifestly is a purely hypothetical case) that the lands of inferior quality were free of tax. For since such lands fix the price of wheat the owners of better lands could not raise the price, and since the tax is imposed on acreage, the tax would simply represent a diminution of their revenue.

So much for the fixed tax per acre according to quantity or quality—a tax that is to-day virtually unknown in civilized communities.

Of somewhat more practical interest in some countries is:

III.—The Tax on Gross Produce, or Tithe.

The incidence of a land tax on gross produce has been most clearly discussed by John Stuart Mill, who has been far more successful in his treatment of this tax[1] than in that of the other taxes with which we shall have to deal. Mill holds that a tithe, because it is imposed on land of all qualities, reduces corn rents in equal proportions; but that in the same proportion as corn rent is reduced in quantity, the corn composing it is raised in value. The producer on the worst land now pays one tenth of his produce in kind, but since all prices are fixed by his produce, his nine-tenths will sell for as much as the whole ten-tenths previously sold for. At first, therefore, a tithe would be shifted to the consumer.

But, as Senior has shown, this would be only the immediate, not the ultimate, effect.[2] The final result would be not an increase of price, but a diminution of production and therefore a deduction from rent. It would ultimately be a burden, not to the consumer but to the producer. This point has been demonstrated so clearly by both Senior and Mill that it will not be necessary to repeat their arguments, so familiar to all English-reading students. Moreover v. Thünen had already pointed out that the question whether a land tax is shifted to the consumer or not depends largely upon the character of the population as con-

[1]This is true, however, only of the later editions, where Mill accepted the corrections of Senior. *Cf.* "Principles of Political Economy", Book V, chap. iv, §§ 3, 4.

[2]Senior, "Political Economy", 122–125, sixth edition, (1872).

sumers. In poor countries a land tax would not even in first instance be shifted on the consumer, because the consumers could not afford to pay more. Such a tax would then simply lead to a lowering of the standard of life of the consumer, and to a decrease in the prosperity of the producers.[1]

Finally the doctrine that the tithe, even as the immediate result, is shifted to the consumer depends on the assumption that the tax is an universal tax, applicable to all the land. This is not necessarily true. To-day *e. g.* in England, only part of the land is still titheable, so that, as in the case of all partial taxes, the burden would be borne by the producer and not by the consumer. Even if all the land were titheable the presence of international competition, as will be shown later on, would render the tithe virtually a partial tax and thus not susceptible of being shifted to the consumer. In all the civilized countries where the tax on gross produce still exists to-day, it can no longer be regarded as one that is inevitably and necessarily shifted to the consumer.

We come finally to the fourth and fifth cases, viz.:

IV and V.—The Tax assessed according to Net Profits, or to Selling Value of the Property.

These two bases of the tax are equivalent, as has already been indicated. For the selling price of agricultural land is nothing but the capitalized value of the net profits ordinarily derived from its use.

Theoretically there may be two cases. Either the land tax is a part of a wider system which taxes

[1] v. Thünen, "Der isolirte Staat". Erster Theil (2nd. ed. 1875), 326–339.

also all other net profits or all other capital or property; or the land tax is a single, exclusive tax, while other profits or other classes of property are exempt.

In the case of a general tax on profits or of a general property tax, it is difficult to see how the land tax can be shifted to the consumer. The theory assumes that the landholder at the margin of cultivation will otherwise abandon his farm, after the imposition of the tax, and transfer his capital and labor to some other occupation. But to this argument it may be objected that if all other profits or property are equally taxed he would gain nothing by such a transfer. In fact, under a system of a general tax there would be absolutely no inducement for him to abandon his farm; and prices would consequently not be raised. If, therefore, a tax on landed profits or landed property were simply a part of a general income or a general property tax, there would be no shifting of the tax. It would tend to stay where it was put.

It might be asserted, however, that our general property tax is so only in name, since personal property as has been indicated above, is virtually exempt from taxation outside of the rural districts. It might further be said that Ricardo and the other English authors discussed this form of the tax on the assumption that it was an exclusive tax. Nevertheless it may be confidently affirmed that even on the assumption of the tax on agricultural profits or real estate being an exclusive tax it does not necessarily follow that it will be shifted to the consumer.

Ricardo's theory would hold good on two conditions—first, that there was an absolute mobility of capital and labor, and second, that the community in

question was so isolated that the farmers could fix the price of their own produce. In actual life, however, these conditions are far from being really existent.

The whole theory rests on the assumption that the landowner of the worst land in cultivation will abandon the land rather than cultivate it at a loss; and that the decrease of supply will raise prices to the consumer. Now in the first place it is incontrovertible that an increase of price will often lead to a decrease of consumption, which again would react upon the price,—so that at best only a portion, and not the whole, of the tax might be shifted to the consumer. But, furthermore, it is in actual life a very difficult matter for producers to decrease the supply of agricultural products. In order that any appreciable influence may be felt in the price it would be necessary for whole tracts of the lands at the margin of cultivation to be abandoned. Now this practically means wholesale ruin for immense classes, who perhaps have invested large sums in improving the land. Rather than abandon the land they will often prefer to continue cultivation at less than usual profits, for the no-rent land is simply that on which the cultivator gets just sufficient profits above the cost to enable him to live comfortably. In other words the tax would often have the influence of simply further degrading the position of the cultivators,—who will still prefer to remain on their land rather than lose all the capital invested. Only when the tax is so exorbitantly high as to swallow up the whole rent, and the whole profits, so as absolutely not to leave the cultivator any margin for living expenses, will he abandon the land in such large quantities as to

affect a material decrease of supply. But such a tax has not been known in civilized communities. In other words, a tax on the landowner, if it be not absolutely extortionate, will simply reduce the profits of the landowner. In proportion, that is, as the Ricardian theory of absolute mobility of capital from agriculture to commerce is attended with practical difficulties, the tax in actual life will tend to rest on the landowner and not on the consumer.

Secondly and more important, the Ricardian theory assumes an absolutely isolated community. But in actual life the market value of agricultural produce is fixed by the conditions of production in widely separated localities or countries. The imposition of a tax on the landowner of any one particular locality therefore cannot possibly change the price of the product. Ricardo overlooked the theory of international relations. If a tax precisely identical in character and amount were imposed by all countries on all farmers, then indeed the tax might be shifted to the consumer, given the absolute mobility of capital just discussed. But this is never the case. The Western farmer the price of whose wheat is fixed in Liverpool by the conditions of production in countries thousands of miles distant, will not get a whit more for his products if his taxes are doubled. He and he alone must bear the burden of the tax.[1]

In fact, if the Ricardian theory were absolutely true, it would be virtually impossible to make the landowners or farmers suffer by any land tax, provided it were not levied expressly on the pure economic rent. A country might then raise its entire revenue

[1] Cf. *infra*, the discussion of the incidence of a tax on net profit in general, p. 16.

by imposing taxes on land alone, and yet in no wise injure the agricultural interests. Yet all history has proved the error of this view. From the day of the exactions of the Oriental monarchs and of the later imperial Roman tax system to the mediaeval methods of Spain and the arbitrary land tax of pre-revolutionary France, much of the misery of the agricultural classes must undoubtedly be attributed to the revenue system which burdened in first instance and primarily the farmer. Implicit reliance on the Ricardian doctrine might justify every exaction on the farmer, but would inevitably react on agricultural prosperity.[1]

Our conclusion, hence, is that under actual conditions in America to-day the landowner may virtually be declared to pay in last instance the taxes that are imposed on his land, and that at all events it is absolutely erroneous to assume any general shifting to the consumer. In so far as our land tax is a part of a general property tax, it cannot possibly be shifted; in so far as it is more or less an exclusive tax it is even then apt to remain where it is first put—on the landowner.

In England, where the farmer is almost universally the tenant and not the landowner, and where the rural tax or rate, as it is called, is levied according to rental value and imposed on the occupier, the question is primarily as to the incidence of the tax between landowner and tenant. It may be said that the tax will fall on the landowner in the case of pure competitive rents, and will be divided between the parties in the case of non-competitive rents. At any given time

[1] *Cf.* Du Puynode, "De la Monnaie, du Crédit, et de l'Impôt". II, 153.

when the tenant makes out his lease he makes allowance for the rates which are collected from him. The rent which he is willing to give will vary with the tax which he is compelled to pay. In so far the burden falls wholly on the landowner. On the other hand if, after the lease has been made out, a change is made in the rates, either by law or by the working of local causes, this increase necessarily falls on the tenant farmer who advances the tax. Still this is not of much consequence in the long run because the tenant will insist on an allowance for the increase when a new lease is taken. On the whole, therefore, it may be said that the tax on agricultural land falls on the landowner, whether the owner be the occupying farmer as in America, or whether they are distinct personages as in England. But this is true only on the assumption that the rent is a true competitive rent. In that large part of England where there are no leases, and where farmers are generally charged with a lower rent than the purely competitive or rack rent, the greater portion of the recent increase in local rates has fallen on the tenant, not the landlord. Theoretically the occupier might demand and obtain a readjustment of his rent with every increase of rates paid by him; but practically as a matter of fact the greater portion of English farmers are not rack-rented. The rent is changed very rarely because it is inconvenient and expensive for the farmer to remove.[1] Thus in the case of non-competitive rents the incidence of the tax is partly on the owner, partly on the tenant.

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[1] See the careful analysis in Goschen, Draft report to the select committee on local taxation of 1870. "In his Reports and Speeches on Local Taxation", 1871, 165-166.

CHAPTER III.

TAXES ON URBAN REAL ESTATE.

In the case of city real estate it will be necessary to make a distinction between the two components of the real estate tax—the ground tax and the buildings or house tax,—the tax on the site and the tax on the structure. For they are really governed by entirely distinct principles. Strictly speaking we should have drawn the same distinction in the case of the agricultural land owner. But the distinction is unimportant in that case because in America at all events the tenant is almost in all cases the owner, and because the value of the farmer's buildings is generally of minor importance when compared to the value of his land. But in so far as this is not true, the same principles apply as those to be discussed now.

In the American cities where the occupiers of houses are frequently not the owners, the real estate tax is levied on the owners of the property, and the question of ultimate incidence is as between the landlord and the tenant—the owner and the consumer, *i. e.* the occupier. In England where the local rates are levied with very few exceptions on the occupiers,[1]

[1]Theoretically the local rates in England are assessed on the occupier. Even for a long period before the Elizabethan poor law (43 Eliza., Chap. 2) which is the basis of all English local taxation, it was the occupier and not the owner on whom fell the duty of relieving the poor. *Cf.* in general the history of local assessments in Castle, "On Rating," Chap. 1, and a volume published by the Poor Law Commissioners in 1846 entitled "The Local Taxes of the United Kingdom". However, under the Small Tenements Act of 1869 (32

not the owners, and are proportional not to capital value but to rental value, the question is more complicated because of the peculiar divisions of ownership. Thus not only is the occupier almost universally distinct from the owner of the building, but the owner of the building generally does not own the land. Furthermore the building owner usually does not pay a ground rent to the original landowner, but pays only a leasehold ground rent, which changes from time to time, to the individual or intermediary who has leased the land on a long rental and at a fixed ground rent from the original owner. The question of the incidence of rates is in such a case between the several parties—the landowner, the leaseholder, the building-owner and occupier.[1] Such

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and 33 Vict., Chap. 41, §§3, 4) wherever the rateable value does not exceed £20 in London, £13 in Liverpool, £10 in Manchester or Birmingham, or £8 elsewhere, the owner may compound for the rate, and may be assessed instead of the occupier. Furthermore by the act of 1850 (13 and 14 Vict., Chap. 99) whenever the tenancy is for less than three months the occupier may deduct the rate from the rent. Under these two acts it has now become the practice for a part of the tenement house population and even for the inmates of flats and apartments to have the rates paid by the landlords, not the tenants. Nevertheless, in default of actual statistics it may be said that in the English towns local taxes are paid in first instance generally by the occupiers.

[1]There are four chief methods according to which houses are built in the English cities: (1) the freehold purchase system, where the builder simply buys the lot outright; (2) the freehold rent charge system, (called in Scotland the feu-system and in Manchester the chief-rent system) where the landowner sells the land to the builder and has no reversionary interest but reserves a perpetual fixed yearly payment called the rent-charge or chief; (3) the long building lease system where the builder takes a lease for 999 years, at a fixed annual rent; (4) the short building lease system (or London leasehold system) where the landowner leases the land to the builder, on what is known as an "improved leasehold ground-rent". See Sargant, "Urban Rating", 1890, Chap. 1; Evidence and Report of the select committee on Town Holdings, 1886–1890; and Munro, "The Local Taxation of Chief Rents", 1891.

conditions, although rare, are not absolutely unknown in American cities also. Our study of the shiftings, if true at all, must be applicable equally to the simple American and the complex English conditions.

The urban real estate tax is either a land tax, as in the case of vacant lots, or a tax on both the lot and structure, called in America the real estate tax and on the continent the house tax. Both these designations are, economically speaking, incorrect. The continental term is wrong because the house tax really includes a tax on the site as well as a tax on the structure. The American term is inexact because it confuses such entirely distinct taxes as the ground tax and the building tax, each of which is governed by different laws of incidence.

The value of a house depends upon the value of the structure apart from the land, plus the value of the lot. The value of the structure itself is fixed by the law which governs the value of any commodity whose supply can be increased at pleasure, i. e. in the long run it is equal to the cost of production, or rather of reproduction. The rent of the house proper is normally equal to the interest on the capital expended plus an annual sum which, when capitalized, will be sufficient, after paying for all repairs, to replace the capital by the time the house is worn out, plus the premiums on the fire insurance policy. The laws which govern the incidence of taxes on houses or house rent are therefore, as we shall see, analogous to those which govern the incidence of taxes on capital or competitive profits. On the other hand the value of the lot is fixed in agreement with the general principles of economic rent, according to which the price paid is measured by the superiority

of situation.[1] It would be still more exact to say that the value of a city lot is fixed by the general law of price which governs commodities that are not susceptible of a voluntary increase of supply, and that the economic rent of a lot is fixed by the law of monopoly value or monopoly profits.

We can assume four cases which correspond to actual facts:

I. The tax may be levied on the ground-owner alone, without any reference to a house tax on the house owner. This would correspond to Henry George's single tax. It would be in effect a tax on ground rents.

[1] Pantaleoni, "Traslazione dei Tributi", 208–213 makes a very long-winded argument against confusing economic rent with the rent of a city lot. Economic rent with him means agricultural rent and is due only to the law of diminishing returns. Rent arising from situation is not economic rent, but what he calls surplus rent (*sopra reddito*). But this surplus rent is simply another name for profits. Rent proper, he maintains, arises from the fact that the price is the same while the cost of production differs. Surplus rent, or profits on city lots, arises from the fact that prices differ, while the cost of production remains the same. The English, he thinks, have improved upon the Germans and French in distinguishing between land rent and ground rent; but have not seen that ground rent is really no economic rent at all. In answer to Pantaleoni it may be said that there is a certain justice in his distinction, but precisely in the opposite way from which he understands it. It is utterly arbitrary to confine economic rent to that arising from the law of diminishing returns. Ricardo himself saw this and Thünen developed it. On the other hand what there is of truth in what Sidgwick calls the static theory of rent is equally true of the causes which fix the site rent of a building lot. In other words, instead of applying the principle of economic rent to city lots, it would be more exact to say that the same reasons which fix the differences in value of a city lot also fix those of agricultural lands, i. e. the differences in the relative situation or of relative fertility combined with differences in situation,—or, in short, differential advantages in yielding net profits.

II. The tax may be levied on the house-owner, who may or may not be the ground-owner. This is the case with the Gebäudesteuer in Germany, and the Hauszinssteuer in Austria, *etc.*

III. The tax may be levied on the ground-owner, who is at the same time the house-owner. This would be the real estate tax of the United States.

IV. The tax may be levied on the occupier. This is the case with the local rates and the inhabited house duty in England.

It is with this fourth case alone that the English economists have busied themselves. On the other hand, most of the French and German works discuss only the second case.

I.—Tax on Ground-Owner.

The case of a tax levied only on the ground-owner is exceedingly simple. The owner who leases his land will always endeavor to get as much as possible for it. This price will in general be entirely unaffected by the imposition of a tax. For since the supply cannot be increased, and there is no question of cost of production, the only change in price will be effected through a change in the demand. Price, in other words, will be fixed by the degree of marginal utility. Now if the demand for the site increases to such an extent that the ground rent not only covers the new tax but leaves a profit in addition, the tax cannot be shifted to the lessee. For the price would have been the same without the tax, since the demand of the lessees is not affected by a tax on the lessor. The ground-owner will simply get less rent than he would have obtained had no tax been imposed,—that

is, the tax will fall on him. Again, if the demand for the site decreases, the price will diminish and the ground-owner can certainly not shift the tax. And if he sell the land in the meantime he will lose again in the diminished selling value of his lot. Finally if the demand remains the same, there will be no alteration of the price, and the ground-owner simply obtains less net income because of the tax. Therefore it may be laid down as a general rule that a tax laid on the owner of the soil, or on ground rents, cannot be shifted.[1]

When the tax on ground rents, however, is assessed not on the ground-owner but on the occupier, the results, as we shall see later on, are somewhat different.

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[1]J. S. Mill, Book V, Chap. 3, §6, tries to show that this is true only if we assume an equivalent tax on agricultural rent. He says, "If a tax were laid on ground rents without being also laid on agricultural rents, it would, unless of trifling amount, reduce the return from the lowest ground rents below the ordinary return from land, and would check further building . . . until increased demand or diminution of supply . . . had raised the rent by a full equivalent for the tax. But whatever raises the lowest ground rents raises all others, since each exceeds the lowest by the market value of its peculiar advantages".

The fallacy of this argument consists in the assumption of a no-rent building lot, a tax on which affects the rents of all city lots. The ground rent of a city lot has nothing to do with the question whether or not there is any no-rent land. The price for which a lot will rent is fixed entirely by the relative demand for the plot, since the question of supply or cost of production cannot enter into the problem. But the relative demand on the part of the lessee, as we have seen, cannot possibly be affected by a tax on the lessor. Hence a tax on ground rents will fall on the ground-owner, whether or not there be an equivalent tax on agricultural rent. The whole question moreover has simply a theoretical interest, since agricultural lands are almost always taxed as well as city lots. Sidgwick, "The Principles of Political Economy", Book III, Chapter viii, §8, iv, falls into the same error as Mill. See preceding note.

II.—Tax on House-Owner.

Let us take up next the case where the tax is imposed on the house-owner, apart from the question whether or not he is the landowner. In other words let us deal with the tax on the structure, or, if the tax is not levied according to capital value, with the tax on the building rent as opposed to the ground rent.

The generally accepted doctrine of Adam Smith, Ricardo and Mill may be expressed as follows: Buildings represent the investment of so much capital and labor. They require an outlay for construction, for maintenance, for repairs, for insurance. No one will enter on the business of building houses unless he can count on a definite profit, which must in general be equal to the returns from capital invested in undertakings of approximately the same nature,—that is in undertakings where the risk, the chances, the labor required and the general conditions which affect the investment of capital are about the same. A tax imposed on the building-owner will therefore generally be shifted to the occupier. For if the tax could not be shifted, it would reduce the profits of the builders below the customary level in similar occupations. The result would be a cessation of building operations, a consequent scarcity of houses and a gradual increase in the rent or value of existing houses until the margin will again be high enough to tempt the builder into further operations. The working of this law of the transferability of capital will of course be slower than in the case of quickly consumable commodities. For since houses are more or less permanent in character we cannot

when the tenant makes out his lease he makes allowance for the rates which are collected from him. The rent which he is willing to give will vary with the tax which he is compelled to pay. In so far the burden falls wholly on the landowner. On the other hand if, after the lease has been made out, a change is made in the rates, either by law or by the working of local causes, this increase necessarily falls on the tenant farmer who advances the tax. Still this is not of much consequence in the long run because the tenant will insist on an allowance for the increase when a new lease is taken. On the whole, therefore, it may be said that the tax on agricultural land falls on the landowner, whether the owner be the occupying farmer as in America, or whether they are distinct personages as in England. But this is true only on the assumption that the rent is a true competitive rent. In that large part of England where there are no leases, and where farmers are generally charged with a lower rent than the purely competitive or rack rent, the greater portion of the recent increase in local rates has fallen on the tenant, not the landlord. Theoretically the occupier might demand and obtain a readjustment of his rent with every increase of rates paid by him; but practically as a matter of fact the greater portion of English farmers are not rack-rented. The rent is changed very rarely because it is inconvenient and expensive for the farmer to remove.[1] Thus in the case of non-competitive rents the incidence of the tax is partly on the owner, partly on the tenant.

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In the American cities where the occupiers of houses are frequently not the owners, the real estate tax is levied on the owners of the property, and the question of ultimate incidence is as between the landlord and the tenant—the owner and the consumer, *i. e.* the occupier. In England where the local rates are levied with very few exceptions on the occupiers,[1]

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In the case of city real estate it will be necessary to make a distinction between the two components of the real estate tax—the ground tax and the buildings or house tax,—the tax on the site and the tax on the structure. For they are really governed by entirely distinct principles. Strictly speaking we should have drawn the same distinction in the case of the agricultural land owner. But the distinction is unimportant in that case because in America at all events the tenant is almost in all cases the owner, and because the value of the farmer's buildings is generally of minor importance when compared to the value of his land. But in so far as this is not true, the same principles apply as those to be discussed now.

In the American cities where the occupiers of houses are frequently not the owners, the real estate tax is levied on the owners of the property, and the question of ultimate incidence is as between the landlord and the tenant—the owner and the consumer, *i. e.* the occupier. In England where the local rates are levied with very few exceptions on the occupiers,[1]

[1]Theoretically the local rates in England are assessed on the occupier. Even for a long period before the Elizabethan poor law (43 Eliza., Chap. 2) which is the basis of all English local taxation, it was the occupier and not the owner on whom fell the duty of relieving the poor. *Cf.* in general the history of local assessments in Castle, "On Rating," Chap. 1, and a volume published by the Poor Law Commissioners in 1846 entitled "The Local Taxes of the United Kingdom". However, under the Small Tenements Act of 1869 (32

the qualification to be noticed below,—the tax on the building owner is shifted. And since, as we have just seen, the tax can not be shifted to the ground-owner (except in the rare case mentioned) it will tend to be shifted on the other party interested—the occupier. In other words, given an increased demand for house accommodations, the rents of existing houses will rise until the supply of new structures is equal to the demand.

Now it may be said that in the meantime the house-owners have a practical monopoly. Theoretically indeed the house-owner during the interval would himself bear the tax if the rise of rents were due solely to increase of population, because in the face of this increased demand he could have obtained the identical rent had the tax not been imposed. In other words, as in the case of all monopolies where the price is fixed only by the purchasing power of the consumer, the tax would simply mean a diminution of the otherwise greatly enhanced profits to the house owner. Practically however there is never such an interval in progressive communities. Houses are built continually, and if there is any lack of supply it is then owing to the decreased profits of the house building. In order that these profits may be secured, the tax must fall where alone there is a margin for it, that is on the rent paid by the occupier. But since the rents in the new houses fix the standard of rents in the old houses, (allowance being made for the superiority of situation, which however has nothing to do with the building rent, but only with the ground rent) the owners of all houses both old and new are able, in the normal cases here cited and in the long run, to shift the burden to the tenant.

But it must be remembered that this is true only in the normal cases and in the long run.

The second qualification of the doctrine that the building tax will be shifted to the occupier rests on the distinction between a general and an exclusive tax. The whole argument up to this point has been conducted on the assumption that the house tax is a special or exclusive tax. As soon as other forms of capital or other profits of investments also are taxed, the whole basis of the argument falls away. This has been almost totally overlooked by all the writers on the subject. The doctrine of the shifting of a house tax on the occupier depends on the assumption that would-be house builders will otherwise prefer to put their money in non-taxable investments or occupations, which would bring about the scarcity of houses and the increase of rents. But if other capital or profits also are taxed there will be no reason for refusing to invest in houses. Rents and values will hence not rise, and the tax cannot be shifted. In other words, when a house tax is part of a system of taxation the other elements of which are taxed at the same rate, the incidence of the tax will always be on the original taxpayer, i. e. the house-owner. His profits like those of all other capitalists are reduced by the tax.

So again if house property or house rents are taxed at a higher rate than the property or profits of other classes, only the surplus above the average rate of the tax will be shifted to the occupier, and that only in the normal cases already mentioned.[1]

[1]The theory of capitalization of incidence is not applicable here, although remarkable to say it has been attempted by Myrbach, "Die Besteuerung der Gebäude and Wohnungen in Oesterreich", *Tübinger Zeitschrift*, Vol. 41 (1885) esp. p. 409.

of situation.[1] It would be still more exact to say that the value of a city lot is fixed by the general law of price which governs commodities that are not susceptible of a voluntary increase of supply, and that the economic rent of a lot is fixed by the law of monopoly value or monopoly profits.

We can assume four cases which correspond to actual facts:

I. The tax may be levied on the ground-owner alone, without any reference to a house tax on the house owner. This would correspond to Henry George's single tax. It would be in effect a tax on ground rents.

[1] Pantaleoni, "Traslazione dei Tributi", 208–213 makes a very long-winded argument against confusing economic rent with the rent of a city lot. Economic rent with him means agricultural rent and is due only to the law of diminishing returns. Rent arising from situation is not economic rent, but what he calls surplus rent (*sopra reddito*). But this surplus rent is simply another name for profits. Rent proper, he maintains, arises from the fact that the price is the same while the cost of production differs. Surplus rent, or profits on city lots, arises from the fact that prices differ, while the cost of production remains the same. The English, he thinks, have improved upon the Germans and French in distinguishing between land rent and ground rent; but have not seen that ground rent is really no economic rent at all. In answer to Pantaleoni it may be said that there is a certain justice in his distinction, but precisely in the opposite way from which he understands it. It is utterly arbitrary to confine economic rent to that arising from the law of diminishing returns. Ricardo himself saw this and Thünen developed it. On the other hand what there is of truth in what Sidgwick calls the static theory of rent is equally true of the causes which fix the site rent of a building lot. In other words, instead of applying the principle of economic rent to city lots, it would be more exact to say that the same reasons which fix the differences in value of a city lot also fix those of agricultural lands, i. e. the differences in the relative situation or of relative fertility combined with differences in situation,—or, in short, differential advantages in yielding net profits.

II. The tax may be levied on the house-owner, who may or may not be the ground-owner. This is the case with the Gebäudesteuer in Germany, and the Hauszinssteuer in Austria, *etc.*

III. The tax may be levied on the ground-owner, who is at the same time the house-owner. This would be the real estate tax of the United States.

IV. The tax may be levied on the occupier. This is the case with the local rates and the inhabited house duty in England.

It is with this fourth case alone that the English economists have busied themselves. On the other hand, most of the French and German works discuss only the second case.

I.—Tax on Ground-Owner.

The case of a tax levied only on the ground-owner is exceedingly simple. The owner who leases his land will always endeavor to get as much as possible for it. This price will in general be entirely unaffected by the imposition of a tax. For since the supply cannot be increased, and there is no question of cost of production, the only change in price will be effected through a change in the demand. Price, in other words, will be fixed by the degree of marginal utility. Now if the demand for the site increases to such an extent that the ground rent not only covers the new tax but leaves a profit in addition, the tax cannot be shifted to the lessee. For the price would have been the same without the tax, since the demand of the lessees is not affected by a tax on the lessor. The ground-owner will simply get less rent than he would have obtained had no tax been imposed,—that

is, the tax will fall on him. Again, if the demand for the site decreases, the price will diminish and the ground-owner can certainly not shift the tax. And if he sell the land in the meantime he will lose again in the diminished selling value of his lot. Finally if the demand remains the same, there will be no alteration of the price, and the ground-owner simply obtains less net income because of the tax. Therefore it may be laid down as a general rule that a tax laid on the owner of the soil, or on ground rents, cannot be shifted.[1]

When the tax on ground rents, however, is assessed not on the ground-owner but on the occupier, the results, as we shall see later on, are somewhat different.

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[1] J. S. Mill, Book V, Chap. 3, §6, tries to show that this is true only if we assume an equivalent tax on agricultural rent. He says, "If a tax were laid on ground rents without being also laid on agricultural rents, it would, unless of trifling amount, reduce the return from the lowest ground rents below the ordinary return from land, and would check further building . . . until increased demand or diminution of supply . . . had raised the rent by a full equivalent for the tax. But whatever raises the lowest ground rents raises all others, since each exceeds the lowest by the market value of its peculiar advantages".

The fallacy of this argument consists in the assumption of a no-rent building lot, a tax on which affects the rents of all city lots. The ground rent of a city lot has nothing to do with the question whether or not there is any no-rent land. The price for which a lot will rent is fixed entirely by the relative demand for the plot, since the question of supply or cost of production cannot enter into the problem. But the relative demand on the part of the lessee, as we have seen, cannot possibly be affected by a tax on the lessor. Hence a tax on ground rents will fall on the ground-owner, whether or not there be an equivalent tax on agricultural rent. The whole question moreover has simply a theoretical interest, since agricultural lands are almost always taxed as well as city lots. Sidgwick, "The Principles of Political Economy", Book III, Chapter viii, §8, iv, falls into the same error as Mill. See preceding note.

II.—Tax on House-Owner.

Let us take up next the case where the tax is imposed on the house-owner, apart from the question whether or not he is the landowner. In other words let us deal with the tax on the structure, or, if the tax is not levied according to capital value, with the tax on the building rent as opposed to the ground rent.

The generally accepted doctrine of Adam Smith, Ricardo and Mill may be expressed as follows: Buildings represent the investment of so much capital and labor. They require an outlay for construction, for maintenance, for repairs, for insurance. No one will enter on the business of building houses unless he can count on a definite profit, which must in general be equal to the returns from capital invested in undertakings of approximately the same nature,—that is in undertakings where the risk, the chances, the labor required and the general conditions which affect the investment of capital are about the same. A tax imposed on the building-owner will therefore generally be shifted to the occupier. For if the tax could not be shifted, it would reduce the profits of the builders below the customary level in similar occupations. The result would be a cessation of building operations, a consequent scarcity of houses and a gradual increase in the rent or value of existing houses until the margin will again be high enough to tempt the builder into further operations. The working of this law of the transferability of capital will of course be slower than in the case of quickly consumable commodities. For since houses are more or less permanent in character we cannot

assume an actual or immediate diminution of supply, as *e. g.* in the case of agricultural produce. Given a stationary supply of houses, the values or rents will rise only with the slow increase of population, *i. e.* with a relative diminution of supply. But in the long run the working of the law is inevitable. Such a tax will hence be shifted to the consumer, *i. e.* the tenant.

This doctrine, which may be called the orthodox opinion, requires qualification in some particulars. The two chief reasons why the theory of the inevitable shifting of the house tax to the tenant is not always true are (1) the result of a distinction between new and old houses, (2) the result of a distinction between general and exclusive taxes.

In the first place a distinction must be drawn between houses already constructed before the tax is imposed or increased, and those built after the imposition or increase of the tax. It might be argued that since a tax on new houses is always shifted to the occupier—for they would otherwise not be built—the same reasoning would apply to old houses. For a scarcity of houses will affect the values and rents of all houses, whether new or old.

This argument, however, is not convincing. Suppose that a town or a portion of a town is for some reason decaying in influence or desirability. In such a case values and rents of existing houses will of course fall. The owners of existing houses cannot possibly escape bearing the burden of the tax. They cannot shift the tax to the ground-owners, for since the structures are already on the land the ground-owners cannot be compelled by competition to reduce their ground rents. The house-owner will build only

on very long leases. Until the expiration of the lease he certainly cannot shift the tax to the ground-owner. On the other hand the house-owner will not be able to shift the tax on the occupier, because no actual diminution in the supply of houses is possible and because, by the supposition, there is no increase in the demand, but rather the reverse; so that there will also be no relative diminution of supply. Not until a condition of stable equilibrium will have been reached, will the building-owner cease to bear the burden. That is to say, it would not be a question of equality of profits, but simply a question of the existing state of demand and supply. Hence if population is stationary or declining, a tax on existing houses (and there will of course be no new houses, because there will be no demand for them) will inevitably fall on the house-owner. Furthermore, if he sells the house he will lose the capitalized value of the decrease of rent. So that under the theory of capitalization[1] only the original owner will bear the tax until there is a still further decline in population, when the process will repeat itself. Although the condition just described may be considered in some sense an exceptional one, yet the exception occurs in all communities at periodically recurring intervals. And although the reasoning would not be applicable to the general conditions of progressive society where new houses are being continually built, yet the distinction is of sufficient importance to invalidate the hard and fast rule of the orthodox economists.

Another objection, which however is less tenable, has recently been raised against the older doctrine. Pantaleoni in Italy and Sidney Webb in England

[1]See *supra*, p. 62.

maintain that a tax on the building-owner tends to be shifted not on the tenant but on the ground-owner. Pantaleoni claims that this must necessarily happen, because if the tax were to fall on the builders they would build no more houses, and thus effect a decrease in the demand for building lots. This again would result in a depreciation of the value of the land.[1]

This argument rests on a misconception. It is indeed true that the building owners will not bear the tax. But what reason is there for assuming that the mere cessation of building operations, which would ensue on the imposition of the tax, will cause a depreciation in the value of the lot? The non-construction of new houses cannot of itself cause the ground rents of existing houses to fall. It can only prevent a further increase in the value of the land, or perhaps, at most, bring about a fall in the value of vacant lots. Until the old leases run out, the ground rents of occupied lots will certainly not fall even if population and therefore demand diminish. Much less will they fall if simply a tax is imposed. And even after the old leases run out, the ground rents will fall only in case that the taxes on the houses are so extraordinarily high that the building owner, who has the privilege of renewal, will prefer to abandon the house entirely rather than to renew the lease. Only in this most exceptional case can the building tax be shifted in part on the ground-owner. If indeed the law of real estate were changed so that fixtures to the land would not go with the land, and if houses could easily be removed from plot to plot, then—but only then—would it be true that a build-

[1] Pantaleoni, *op. cit.*, pp. 221–223.

ing tax could always be transferred to the ground-owner in the shape of decreased ground rent. But under existing conditions of law and fact this can be true only in the exceptional case just quoted.

Mr. Webb's argument is equally inconclusive. He maintains that the ground landlord is not a fixed point. Land in the neighborhood of a city has only an agricultural value until it becomes ready for splitting up into building plots. But the value of such land, says Mr. Webb, does not pass imperceptibly from agricultural value to the building value. By custom there is always a great jump. The landowner who can get in any case a much larger than the agricultural value, has a fixed point of resistance. He will be willing to take a little less, since it is merely a question of competition between builder and land available for building. Hence the incidence of a tax on houses would be the same as that of a tax on land, viz.: on the landowner.[1]

This argument is fallacious because it ignores the fact that the building site is governed by the law of monopoly value. As between the landowner and the tenant, the tenant is the weaker party. The house builder in normal cases of increasing demand knows that he can more easily raise rents (since demand increases) than compel the ground-owner to take less than the market value. The landowner is not compelled to part with his land; but the tenant is compelled to occupy some apartments.

It would therefore be true in the main that, given the normal conditions of progressive society and the continued existence of prosperity—and apart from

[1] Webb, in Report from the Select Committee on Town Holdings, *etc.*, 1890, qu. 42–44, pp. 5–6.

the qualification to be noticed below,—the tax on the building owner is shifted. And since, as we have just seen, the tax can not be shifted to the ground-owner (except in the rare case mentioned) it will tend to be shifted on the other party interested—the occupier. In other words, given an increased demand for house accommodations, the rents of existing houses will rise until the supply of new structures is equal to the demand.

Now it may be said that in the meantime the house-owners have a practical monopoly. Theoretically indeed the house-owner during the interval would himself bear the tax if the rise of rents were due solely to increase of population, because in the face of this increased demand he could have obtained the identical rent had the tax not been imposed. In other words, as in the case of all monopolies where the price is fixed only by the purchasing power of the consumer, the tax would simply mean a diminution of the otherwise greatly enhanced profits to the house owner. Practically however there is never such an interval in progressive communities. Houses are built continually, and if there is any lack of supply it is then owing to the decreased profits of the house building. In order that these profits may be secured, the tax must fall where alone there is a margin for it, that is on the rent paid by the occupier. But since the rents in the new houses fix the standard of rents in the old houses, (allowance being made for the superiority of situation, which however has nothing to do with the building rent, but only with the ground rent) the owners of all houses both old and new are able, in the normal cases here cited and in the long run, to shift the burden to the tenant.

But it must be remembered that this is true only in the normal cases and in the long run.

The second qualification of the doctrine that the building tax will be shifted to the occupier rests on the distinction between a general and an exclusive tax. The whole argument up to this point has been conducted on the assumption that the house tax is a special or exclusive tax. As soon as other forms of capital or other profits of investments also are taxed, the whole basis of the argument falls away. This has been almost totally overlooked by all the writers on the subject. The doctrine of the shifting of a house tax on the occupier depends on the assumption that would-be house builders will otherwise prefer to put their money in non-taxable investments or occupations, which would bring about the scarcity of houses and the increase of rents. But if other capital or profits also are taxed there will be no reason for refusing to invest in houses. Rents and values will hence not rise, and the tax cannot be shifted. In other words, when a house tax is part of a system of taxation the other elements of which are taxed at the same rate, the incidence of the tax will always be on the original taxpayer, i. e. the house-owner. His profits like those of all other capitalists are reduced by the tax.

So again if house property or house rents are taxed at a higher rate than the property or profits of other classes, only the surplus above the average rate of the tax will be shifted to the occupier, and that only in the normal cases already mentioned.[1]

[1]The theory of capitalization of incidence is not applicable here, although remarkable to say it has been attempted by Myrbach, "Die Besteuerung der Gebäude and Wohnungen in Oesterreich", *Tübinger Zeitschrift*, Vol. 41 (1885) esp. p. 409.

We may thus sum up as follows: If a tax is imposed on the building owner, it will remain on the building-owner when population decreases or is stationary or when the locality decays in desirability. It will be shifted to the ground-owner only when the diminution or decay is so great and the taxes so high that the building-owner will voluntarily relinquish the house rather than renew the lease. It will be shifted to the consumer, that is the occupier, under the normal conditions of advance in economic welfare in so far as the tax is an exclusive tax. Otherwise only so much will be transferred to the occupier as exceeds the usual tax rate for other property or profits, while the remainder will fall upon the house-owner. The exact proportions depend upon the general system of taxation in each particular country or epoch and upon the particular conditions of the individual case.

III.—Tax on House- and Ground-Owner.

We come next to the third case, namely where the tax is levied on the ground-owner who is at the same time the house-owner. This is the common American system of the real estate tax. The question of incidence is here only between the owner and the tenant. The problem is therefore a comparatively simple one, as we need only to combine the conclusions already arrived at in the two preceding cases.

In so far as the real property tax may be resolved into the site tax and the building tax, the tax on the land when assessed on the landowner will tend to remain, as we have seen, where it is first put. The incidence of the ground tax, in other words, is on the

landlord. He has no means of shifting it. For if the tax were to be suddenly abolished he would nevertheless be able to extort the same rent, since the ground rent is fixed solely by the demand of the occupiers. The tax is simply a diminution of his profits.

The incidence of the house tax on the other hand is fixed by the rules laid down above. The question, therefore, as to how far the real estate tax is shifted on the occupier in American cities depends partly on the actual existence or non-existence of a general property tax, partly on the relative value of the house and the lot, and partly on the peculiar circumstances of the particular piece of property.

If our general property tax were actually enforced, then beyond all doubt the real estate tax would be entirely borne by the owner. But it is precisely in the American cities that the general property tax has become practically a real property tax. In other words, city real estate bears if not the exclusive, at least the greater, weight of municipal taxation. In proportion as the city houses are taxed at a far higher rate than other capital, the main condition under which the tax *may* be shifted to the occupier is present. If we take the small American towns where the investments are mainly local and where personal property is reached to a fairly good degree, then it is very probable that the real estate tax is not shifted to the occupier. But the larger the city, and the greater the chances of investment in outside capital, the less will be the proportion of personalty taxed, and the greater will be the possibility of a shifting of a part of the real estate tax.

The possibility of the tax being shifted turns into a probability when we remember that the building

tax tends to form the greater part of the total tax. The average dwelling house in New York city, for example, is worth, when first built, from two to three times as much as the lot. In the tenement house districts the proportion is slightly, if at all, less, except in the case of the old tumble-down wooden houses which are fast disappearing. Of course it is true that with the passage of time the value of the house tends to decline while that of the lot tends to increase, so that it might be inferred that our real estate tax falls mainly on the owners. But this tendency is materially counteracted by the fact that as the site becomes more valuable, the owners are apt to tear down the old structure and to erect more expensive, and therefore more lucrative, buildings. Even in the crowded business centres it is now becoming the custom to erect vast buildings whose value considerably exceeds that of the ground on which they are built.

Finally, remembering the qualifications laid down above, it may be said in short that while the real estate tax falls on the owner in case of stationary or declining population, a considerable portion of the tax is shifted on the tenant in the normal case of prosperous town or city districts under the present administration of our property tax. When we reflect that in the city of New York over three-quarters of the population live in tenement houses, we are thus forced to the conclusion that a large burden of our American local taxation is to-day borne by those least able to pay. The question as to how far these may again be able to shift the tax on others is a part of the larger question of the tax on property, profits or wages, and will be discussed later on.

IV.—Tax on Occupier.

We take up finally the question of the incidence of a tax assessed upon the occupier according to the rent he pays. This is the system of the English "local rate." Here again we must distinguish between the ground rent and the building rent.

Let us discuss first that portion of the rent theoretically levied on the land. In accordance with the general principles laid down above in our discussion of the tax on the ground-owner it might seem that the tax on rent though advanced by the occupier must in the long run be borne by the ground-owner. The tax will be shifted by the occupier to the house-owner, it is said, because when the tenant takes out his lease he will make a deduction from his rent measured by the height of the tax. He will offer only as much rent as is warranted by the superiority of the site, and this superiority is not increased by the imposition of a tax. In so far then the tax will fall on the house-owner. But the building-owner again will shift the tax to the owner of the land. As it has been said, "The builder calculates on a certain profit, or else he would not build; he knows that tenants of a certain class can afford to give a certain rent and no more for a certain kind of house; and therefore if building is to take place at all, it is clear that the rates must fall there where alone a margin exists to bear them; that is to say, on the price given, or ground rent promised to the owner of the soil".[1]

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[1] Goschen, Draft report, etc. *Op. cit.* 166. The same idea is shared by most of the English writers. The evidence given before the Select Committee on Local Taxation in 1870 contains every possible view. But they are for the most part mere bald statements. *Cf.* esp. qu. 1276, 2731, 2739, 3211, 3404 and 4050.

The contention, however, that this part of the tax falls wholly or necessarily on the ground-owner, although it has been usually adopted, is partially incorrect; and for three reasons. First, the ground rent might be so low and the rates so high that the builders could not afford to erect any more houses. They could not hire the land for any less because the ground rents are so low that the owner would otherwise prefer to use the land for other purposes. The result would be a diminution in the supply of houses and a consequent rise of rent to the tenant or consumer. But this first supposition, let us say, will happen very rarely and may be passed over as unimportant.[1]

Secondly, the whole argument that this part of the tax falls on the landowner rests on the assumption that at the beginning of every lease the lessee will make allowance for the tax. The assumption is not of much use in the case of long leases. After the lease has been taken out an unexpected change may occur in the rates. In fact, the growing tendency of modern local taxation is toward an increase. The landowner who has fixed the ground rent for a number of years will still get this rent irrespective of any growth of rates. The increased burden can, then, not be shifted on him. It must be borne by the occupier who advances the tax in first instance. Not until the expiration of the lease will the tenant be able to make a new arrangement by which he will try to shift the burden on to the owner. Thus only in the case of short tenancies could it be true that the tax falls on the owner. But in all those numerous cases—numerous especially in England—where the occupier

[1]Mr. Goschen himself makes allowance for this.

rents for a term of years, the excess of any rates beyond the amount calculated in the original lease necessarily falls on the occupier. The important point to be noticed is the *original* imposition of the tax—a point too often neglected. If the owner were to be assessed for the taxes in first instance, as in America, there would be no question that this excess of taxes, just as the remainder of the ground rent tax, might fall on him. But if the occupier advances the tax, he can not improve his condition until the expiration of the lease. In England, then, the ground rent tax does not fall wholly on the owner, but at any given time may be borne in part by the occupier.

Thirdly, we come to the question whether any part is really borne by the owner at all. In the preceding paragraph it has been taken for granted that at the beginning of each short lease the tenant will insist on a reduction of the rent as a compensation for the local rates assessed upon him. Only on this assumption will the owner ultimately bear the taxes. But this assumption is not always correct. We come in fact to the pith of the problem, and to its most important phase. The question is this: Who bears the taxes in the case of short leases or tenancies by the year, the quarter, or, as is the case in the majority of the tenement house population, the month or week? It is precisely in this class of cases that the ground rent in the crowded slums forms so large a proportion of the total rent.

It may be said that the ultimate incidence of the ground tax is fixed by the general law of value. If the lot is situated in an outlying or decaying portion of the town where the demand is slack the tax, even if advanced by the tenant, will be shifted to the

landlord. The occupier can afford to choose and will not voluntarily assume the burden of any one else. But in proportion as we approach the central or thriving parts of the town the land acquires more and more of a monopoly value, until each square foot commands a fabulous price. In such a case, now, the matter is different. Even if the occupier advances the tax, it is not necessarily true, as Adam Smith says, that "the more the inhabitant was obliged to pay for the tax, the less he would incline to pay for the ground", i. e. that the tax would fall entirely on the ground-owner. If the tenant could always deduct the tax from the rent, it would be true—but not otherwise. If the competition for lodgings in a crowded part of the city be such that a house or an apartment in that locality will rent for two hundred dollars, the occupier who has been paying ten dollars as the ground tax proportion of the total tax will not pay any less for the premises if his tax is increased to fifteen dollars. There is no reason why the landlord should take any less, as long as the demand has not changed. The one result, indeed, that might ensue would be that the tax would be so high as to cause the tenant to content himself with meaner apartments or rooms in a less desirable locality, in other words to lower his general standard of life—a sad result of high taxes. In such a case the decreased demand for the original house would indeed induce the house owner to be satisfied with less total rent, and he in turn would endeavor to shift the ground-rent portion to the landowner. But as we have seen above he could not do this unless the tax were so high as to make him willing to abandon the house. But, above all, the process here

[1] "Wealth of Nations", Book V, Chap. 2.

described does not by any means imply a shifting of the tax from the occupier to the landowner. The occupier could evade the tax, but could not shift it. Evasion is quite another thing from shifting. The tax that he would pay on his smaller rent would still fall entirely on him. The landlord may have, for the time being, less revenue than before but the new tax levied on the tenant would nevertheless fall on the tenant. A small tax on smaller rent is just as bad as a high tax on high rent.

Conversely, if the occupier has been paying ten dollars as the ground-tax proportion of the total tax, he will not normally have to pay five dollars more for the apartment if his tax is reduced five dollars. He will be compelled to do this only if the competition has suddenly increased to such an extent that the rent demanded by the owner will have no limit but the amount which the occupier can afford to pay. But this is true only in exceptional cases of suddenly enhanced demand, and not true in normal periods when rents are fixed more or less by custom in comparison with neighboring sites of similar eligibility. And even in these exceptional cases, the rise of rent would not be due to the abolition of the tax,—for rents would rise, tax or no tax. Hence it may be said that even in short or periodically renewed leases the ground tax will normally remain on the tenant.[1]

[1]Since the above was written the article of Mr. Blunden on "The Incidence of Urban Rates" has appeared in the *Economic Review* for October, 1891. Mr. Blunden's conclusions agree in the main with mine, with one exception. He seeks to make a distinction between dwelling houses, and shops or business premises, thinking that rates on shops in the best situation fall on th ground-landlord because he possesses a monopoly. But in the first place Mr. Blunden really makes no such distinction, because he tells us (p. 496), that rates on ordinary dwelling-houses in congested areas

Above all, the old theory that the tax on the occupier will be shifted to the landlord rests on the assumption that there is no economic friction. But this assumption is plainly untrue. Just as we objected to the Ricardian absolute theory of the shifting of the land tax to the consumer because of the untenable assumption of perfect mobility of capital and of territorial isolation, so the same objection has been made to the theory of the shifting of the local rates from occupier to landlord because of the same untenable assumptions. As it has been well put, economic rent is "the rent which an intelligent tenant who had an alternative investment for his capital, and mobility, and acquainted with the market and his own industry, would offer to pay".[1] But the rent actually paid

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may also fall on the ground-owner,—while in less desirable localities rates, whether on dwelling-houses or on shops, do not fall on the ground-owner. Mr. Blunden's distinction is therefore really one between monopoly and competitive sites, not between shops and dwellings. But even this distinction of Mr. Blunden's is untenable, for the advantages of sites merge into each other by imperceptible gradations. See note on page 132 below. An increase of rates, says Mr. Blunden, would fall on the landlord. But why should the landlord take any less rent if he has a strict monopoly, and if the demand for that site by other shopkeepers remains the same? The shopkeepers will indeed look upon the increased tax as an increase in their expenses of production, and, since the local rates form a general tax on the whole set of local shopkeepers, they will try to shift the tax to the purchaser of their goods. But that is an entirely different question from the one which is occupying us here. The relative differences in eligibility between the monopoly site and a less desirable site are not altered in the least by the imposition or the remission of a tax which affects both sites proportionally. And there is therefore no reason why rents should be affected by a tax on the occupier,—just as there is no reason why in the United States a tax on the ground-owner will enable him to demand more from the tenant, or why the remission of his tax will induce him to charge less rent.

[1]Sidney Webb in "Select Committee on Town Holdings", 1890, Evidence qu. 51.

often differs from pure economic rent. John Stuart Mill already pointed out that in Ireland agricultural rents are often persistently above the economic rent, mainly because of lack of opportunity and lack of mobility on the part of the tenant. So in the same way the tenants in the slums of large cities have practically little mobility. They must live in the neighborhood of their work, they shrink from the expense involved in moving from apartment to apartment, and their choice is limited in a hundred ways. Here, as in so many other cases, the tendency of the tax is to stay where it is first imposed.[1]

In fact, however, this argument of "economic friction" does not apply to the old theory that rates normally fall on the ground-owner, for this old theory, as we have seen, is no longer tenable. The argument of "economic friction" applies really to the new and more correct theory, here espoused, that rates normally fall on the occupier. The normal state of affairs, as we have just seen, is that the rate rests on the occupier, where it is imposed. The element of "economic friction" enters in the case of decaying or undesirable localities, where there is no competition, and where the occupier will be able to shift the rate to the owner.

We see, thus, that the incidence of a tax on ground rent is not the same when the tax is advanced by the tenant as when it is assessed on the ground-owner. In the latter case, as in the United States, it is always

[1]As Sir T. H. Farrar says: "Whatever be the theory on these matters, a tax is very apt to stick where it first falls". Select Committee, *etc.* Evidence qu. 1246. *Cf.* Thorold Rogers: "It is by no means the case that a person who has a tax imposed upon him can always impose the whole of that tax upon his neighbor". *Ibid.*, qu. 2721.

borne by the ground-owner; in the former case, as in England, it is generally borne to a considerable extent by the occupier and only in more or less unusual cases is it shifted by him to his house- or land-lord.[1]

In regard, now, to that part of the tax which is due to the structure, that is the tax on building-rent, the case is somewhat simpler.

We have seen that even if an exclusive tax is assessed on the building-owner it will be shifted in great part to the occupier in normal cases of increasing demand. *A fortiore* if the tax is levied on the occupier, it cannot be shifted to the building-owner.

[1]Some of the qualifications of the old doctrine are well put by Cliffe-Leslie in the following passage: "The doctrine by which eminent economists of our own day affect to determine the incidence of rates assumes . . . . that capitalists not only know the past and present profits of all occupations and investments, but foreknow them at remote periods,—to the end of a long building lease, for example. Yet it is clearly impossible for persons contemplating the building or buying of new houses to foretell even for twenty years the profits that single investments will yield. The movements of business and population, the demand for houses and other buildings, the increase of wealth and money, and the general range of incomes and prices, the supply of new houses on the spot, the means of locomotion bringing other districts within reach, all defy calculation. . . . . The truth is that the profits of house property, the rents that can be exacted from occupiers and the incidence of rates, depends on no such fiction as the 'average rate of profits', but on the demand for and supply of houses,—and these conditions vary from time to time and from place to place. . . . . . The constant increase of population, the narrow limits of distance from their business within which it is convenient to most people to live, and the cost and trouble to existing occupiers of removal, give the owner, in most cases, the stronger position, and enable him to throw any increase in the rates on the occupier. . . . . The occupier of the house pays all the rent that can be screwed out of him were there no rate,—and to that extent the rates may be said to fall on the owner, the remainder being borne by the workmen."—"The Incidence of Imperial and Local Taxation on the Working Classes", in "Essays in Political and Moral Philosophy", pp. 207–209.

For a tax paid by the tenant is virtually a special tax. There is no other taxable object which can be put in the same category as rent paid by tenants, unless it be the interest paid by debtors. But we have yet to hear of any attempt to tax creditors by levying a tax on interest paid by debtors. In other words, then, in order to ascertain the actual burden we must add to the nominal rent, at all events, that part of the tax which is theoretically levied on the structure apart from the soil. In the long run the occupier will tend to bear the tax, except in those quarters or under those conditions where the demand suffers a considerable check.

Of course this holds good only on the assumption that the rate of the tax is uniform on all the houses concerned. In so far as the rates vary in different parts of the same town, the excess in any particular case will tend to fall ultimately on the owner, not on the occupier. This is simply one instance of a more general law. For if a prospective tenant on whom taxes are levied in first instance has the choice of two houses of equal desirability but in different parts of the town, the amount of the tax being in one case ten dollars more than in the other, he will certainly choose the latter house or compel the owner of the former to forego ten dollars of the rent. In England the districts within which the rate of the tax is uniform are much smaller than in America, and it frequently happens that different parts of the same city, or even opposite sides of the same street, pay different rates because located in different parishes. In such cases it is fair to make a distinction between the constant and the variable or differential part of the building rate, the latter representing the excess above the rate

uniform in all the districts. Only the constant part of the building rate will fall on the occupier; the remainder will be borne by the building-owner, and in certain favorable cases shifted by him on the land owner. This variable element of the building tax, however, will in general be very insignificant in amount for the reason that even in England the normal differences in the rates in city districts which usually have similar expenses will be exceedingly slight.[1] So that even in such a case it may be said that the building tax will fall almost entirely on the occupier.[2]

[1] The contention of Sargant, "Urban Rating", 1890, p. 49, that the differential rate amounts to two-thirds or even three-quarters of the total tax is utterly erroneous, for the reason that he terms "constant" rate only that part of the tax which is uniform throughout the *kingdom*. This is arbitrary and absurd. In speaking of a differential rate we must always compare two houses of equal desirability or in the same neighborhood—for it is manifestly impossible to say how much of the differential rate falls on the structure, and how much on the plot. We must not compare a house in London with a house in a country parish, because it is not a question of competition between them. The rule holds good only within the narrow range of houses subject to the same competition.

[2] Fawcett's discussion of this question is very unsatisfactory. He makes a distinction between buildings in general and those possessing exceptional advantages of situation. In the former case, rates, he says, are a charge on the occupier, in the latter on the ground-owner. "For if rates were remitted, the saving resulting would simply represent so much added to the ground rent, since rent is fixed by the demand, and the demand would not be altered if rates were remitted." Fawcett's argument can be turned against him, for it may equally well be said that, given a certain demand before rates were imposed, the levy of new rates would not change the rent because it would not change the demand. Hence the rates would fall on the occupier who pays them, and not on the ground-owner, whose rent is unchanged. In fact, Fawcett's whole distinction between these classes of houses is untenable. Every house possesses "certain advantage or disadvantage of situation". The

To sum up it may be said that when the local real estate tax is levied according to rental value and assessed in first instance on the occupier, as is the case in England, the main burden of the tax will rest ultimately on the occupier, not the owner of the premises. For the building tax, as we have seen, will usually rest almost entirely on the occupier. And the building tax forms in almost all cases the largor part of the total tax. The tendency to erect costly structures on valuable sites is indeed not quite so strong in England as in America because of the division of ownership between landlord and house-owner. But the tendency nevertheless exists.

Not only does the building tax normally fall on the occupier but, as we have seen, the ground tax will generally be borne to a very great extent by the occupier. If we add this portion of the site tax to what is practically the whole of the building tax, we see that by far the larger part of the total local tax falls on the tenant. Even on the assumption that the incidence of the tax on structure is hypothetically the same as that of the tax on site, it would still remain true that the tax as a whole would tend to rest in considerable part on the occupier, for the reasons that we advanced above in considering the site tax.[1] The determination of the exact proportions is necessarily impossible. But here again, as in the case

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advantages merge into each other in imperceptible gradations. *Cf.* his chapter on The Incidence of Local Taxation in his "Manual of Political Economy", 6th ed. (1883), especially p. 618. On the other hand Ricardo and J. S. Mill fail to make either of the distinctions that I have pointed out in the text, for they maintain that the ground tax falls on the ground-owner, and the house tax on the occupier,—both of which statements are partially incorrect.

[1] *Supra*, p. 127.

of the real estate tax, it may be said that in a prosperous and progressive community the tax will tend to fall chiefly on the tenant, while in decaying and unprosperous districts the tax will tend to fall on the owner,—but in all cases more of the tax will tend to be borne by the tenant when the tax is originally imposed on him than when the tax is assessed on the owner.

It is no wonder, then, that in England the movement for the tax on ground values, assessed on the owner, should now be making such rapid headway. For the English system, with its exemption of the landowner from special assessments for local improvements, and with its casting so large a share of the whole burden on the occupier, is of all systems of direct local taxation perhaps the most inequitable.[1]

[1] In Scotland and Ireland the rates are generally divided between occupier and owner. The same plan is proposed in England.

CHAPTER IV.

INCIDENCE OF TAXES ON PERSONAL PROPERTY, CAPITAL AND INTEREST.

What is called personal property in English-speaking countries includes not only capital in the economic sense, but wealth of other kinds, like money, and consumable commodities not used in production, like books and pictures. Taxes may be imposed either on the property itself or on the revenue derived from the property. Since all taxes are nominally paid out of revenue, it is thus immaterial, so far as the question of incidence is concerned, whether we speak of taxes on capital, or taxes on interest and profits. It has been laid down as a general proposition by a recent writer that "the taxation of property is the taxation of the property-owner."[1] But he simply makes the assertion without attempting to prove it. In reality the matter is by no means so simple as he assumes.

In so far, indeed, as a tax is laid on personal property which is not capital, the tax cannot be shifted. For instance, if a tax is imposed on the permanent owner of luxuries, like pictures or jewels, he and he alone bears the burden. Of this nature are what are known in England as the assessed taxes and in the continental countries as sumptuary taxes. Whatever is held simply for enjoyment and not for sale,

[1]Charles B. Spahr. "The Single Tax": *Political Science Quarterly*, VI, 633.

provided it is not used for productive or lucrative purposes, is not capital. A tax on such property can not be shifted because the property is not sold, and because the property produces nothing which can be sold. Here, indeed, the taxation of property is the taxation of the property owner.

On the other hand the incidence of a tax on capital, or on profits and interest, is somewhat more complicated. We may logically divide the subject into three great heads:

A. An equal tax on all capital or interest.

B. An unequal tax on all capital, or an equal tax on only some forms of capital or interest.

C. A tax on profits.

It is with this last division only that the English economists have hitherto busied themselves, and that in not an altogether satisfactory manner.

A.—An Equal Tax on all Capital.

Let us frankly state at the outset that this is only a hypothetical case. It is the theory of our American property tax. But it is not the practice. And it can never be the practice. Why not?

A tax on capital can be unequal in two ways. There may be inequality in the rate, or there may be inequality in the taxable capital. In other words the tax may be assessed on all capital but in different proportions, or it may be assessed on only some forms of capital. Now an universal tax on all capital is an impossibility in the modern world. It might be true in a completely isolated community, where all the inhabitants employed all their capital within the nar-

row limits of that community. But in actual life it does not exist. Not only does the tax differ from commonwealth to commonwealth, but the field within which capital is employed is as wide as the world; while the efficacy of any tax law is restricted to a particular state or locality. In other words the international employment of capital renders a tax on all capital an impossibility. Only on the assumption that every state in the whole world taxed all forms of capital alike, would we have such an universal tax. But this is plainly untrue, as it is most improbable.

But secondly, even granting that there was such an universal tax, the tax would still be unequal within the limits of any particular state. For even if the state attempted to tax all forms of capital at the same rate, it could never practically succeed. Not only would there always be some forms of capital within the state which would completely evade taxation, as all experience has shown; but furthermore the same legal rate on various kinds of capital would inevitably be a different actual rate. The return of capital is interest. But the rate of interest varies with different kinds of capital, according to the security of the investment, the length of the loan, the state of the money market, and a hundred other factors. For instance, in New York state during the past year the rate of interest has varied from two and a half per cent. on certain prime bonds to a few hundred per cent. on loanable capital in Wall street. The same legal rate of the tax on capital would thus be a very divergent actual rate on the interest. Hence from

whatever point of view we regard it, an equal tax on all capital is an impossibility.[1]

Bearing in mind, then, that an equal tax on capital is only an hypothesis, let us endeavor to ascertain its incidence. The question, of course, can only be between the capitalist and the one who uses the capital, *i. e.* the borrower. The question as between the producer and consumer or purchaser of the commodities is not a question of interest, but a question of profits, and can be better discussed under the third head.

Now as between lender and borrower it is plain that an equal tax on all capital must fall on the lender; that is the capitalist. There would be no way for him to shift the burden. As it is not to be assumed that he would consume his capital unproductively, he would attempt to reimburse himself for the tax either by investing the capital in some business or by lending it to some one else. If he invested it in a business, the demand for loanable capital would decrease as much as the supply. For he would simply be doing what the borrower would otherwise have done. So that the rate of interest would not rise. And if he invested it in fixed capital or land, the rate of interest would certainly not tend to rise. For any large investment in fixed capital would simply set free so much circulating capital, i. e. the purchase price of the fixed capital. So that under either supposition the tax could not be shifted.

Of course there is one case in which the burden of the tax could be partially evaded. If the tax on

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[1]Pantaleoni, "Traslazione", 245 is the only writer that I have met with who does not overlook this fact. His whole discussion on this point is very noteworthy.

capital were so exorbitantly high as to diminish the return to the capital below the rate of what John Stuart Mill called the practical minimum, further accumulations would be decidedly checked. An attempt would be made by the employers of capital to improve production to such an extent that the enhanced profits would still give them the same net returns as before. And that is sometimes the result of taxes on capital; they act as a stimulus to improved methods of production. In so far as this is not true, however, further accumulations of capital would be discouraged. But even in such a case it would not follow that the tax would be shifted to the borrower. The loss would be felt by the community at large in the shape of a decline of general prosperity. And it is utterly impossible to state in advance how much of the burden would be borne by any particular class of the community.[1]

B.—An Unequal Tax on Capital.

Let us now leave the realm of hypothesis and assumption, and come to the practical example of every day life in the tax on capital. This actual tax on capital is, as we have seen, everywhere an unequal tax, however equal it may be nominally or ostensibly. The question thus is: What is the incidence of an unequal tax on capital?

This question again has three branches, according as we discuss the incidence as between (1) the original owner and the new purchaser; (2) the present

[1] John Stuart Mill, Book V, chap. 3, § 3, comes to practically this conclusion in discussing the tax on profits. Properly speaking. the argument is applicable to the tax on capital or interest, as stated in the text.

owner and the borrower; or (3) the producer and the consumer. Let us take these up in order.

1.—*The Incidence of a Capital Tax as between Original Owner and New Purchaser.*

This whole subject is governed by the law of capitalization of incidence, which has already been discussed.[1] We need thus only repeat our conclusion. When a new or suddenly increased partial tax is imposed on any species of capital, the tax, if it cannot be shifted to the consumer of the article, will be discounted in a depreciation of the capital value of the article by a sum equal to the capitalized value of the annual tax, and will therefore fall on the original owner of the commodity before the tax was imposed or increased, and not on the new purchaser. In other words, when two classes of capital are taxed at unequal rates, the excess of the tax above the average rate will tend to be borne by the original holder, because the new purchaser pays so much less for the capital on account of the tax. He will otherwise prefer to invest his money in something else which will bring him the usual interest. It is only when the tax is again increased that the present owner is compelled to bear the new burden. But the limitations of the doctrine must not be forgotten.[2] And it is just because of the failure to notice these limitations that some writers have fallen into the error of assuming that a tax on capital is a tax on the capitalist. If a tax could not be shifted, then indeed the

[1] *Supra*, p. 62.

[2] For a fuller discussion of this doctrine as applied to an important class of capital, see my "Taxation of Corporations" in *Political Science Quarterly*, Vol. V, esp. 671–674

excess of any unequal tax, or the exemption from a tax, would be capitalized or amortized into a change in the capital value of the capital taxed. But this "if" is the crucial point; and, as we shall soon see, it is utterly erroneous to assume that the tax can never be shifted.

2.—*The Incidence of a Capital Tax as between Debtor and Creditor or Borrower and Lender.*

In just the same proportion as it is difficult for a capitalist to shift a tax which is imposed on all capital, it is easy for him to shift to the borrower a tax which is imposed on only some forms of capital. That is to say, in the case of an unequal tax on capital, it is generally the debtor and not the creditor who suffers. How can this be proved?

Two sets of arguments might be used to make good this assertion that a tax on loanable capital will increase the rate of interest to the borrower. The rate of interest on capital can increase only through an increase of the demand for capital or through a decrease of the supply of the capital.

Some writers maintain that demand will increase. Thus it is said that if a tax be imposed on the capitalist, and accordingly the borrower be now allowed to deduct from his taxable property the amount of this debt, the borrower will be able to pay a higher rate of interest. Since he is no longer taxed on the debt, he will be able to lay aside more, and thus increase his effective demand for additional capital. Because of this increased competition for capital, the rate of interest will rise, so to to leave the creditor intact, notwithstanding the imposition of the tax.[1]

[1]This is the argument of Kröncke, Grundsätze einer gerechten Besteuerung, 130–138. *Cf.* "his Einleitung zur Regulirung der Steuern", 35.

This argument, however, is utterly inadequate, as Rau has shown.[1] For in the first place it is not necessarily true that the borrower is allowed to deduct his debts. In the American commonwealths it is frequently the rule that debts cannot be deducted from personal property. Secondly, even if debts are deducted, it does not follow that the competition for capital will increase, for only a part of the debts will have been contracted for industrial purposes, while a portion will have been the result of losses or accidents. An amelioration in the condition of the debtor will therefore just as frequently result in a payment of old debts as in a contraction of new debts. Thirdly, if an increase of the debtor's profits (as in the case of deduction of debts) enhances the demand for capital, then every decrease in the rate of interest would do the same, and this increased demand would counterbalance the decrease in the rate, so that interest could never permanently fall. But this is manifestly absurd and untrue. Hence the argument that a tax on capital will increase demand is untenable.

On the other hand, the argument for a decreased supply is more successful. In fact, this is the real basis of the whole theory of the shifting of the capital tax, whether it be a tax on mortgages or on any other form of loanable capital. The argument was first advanced by Turgot,[2] and rests really on the fundamental assumption of the mobility of capital. Capital shows its mobility in two ways. If employed

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[1] Rau, "Finanzwissenschaft", §§ 381–312, Vol. II, pp. 156–157 (5th edition). *Cf.* Pantaleoni, "Traslazione der Tributi", 253–255, who follows Rau.

[2] Turgot, "Observations sur un Mémoire de M. de Saint-Péravy en faveur de l' Impôt indirect." ' Oeuvres" (ed. Guillaumin) I, 423.

unremuneratively, it will be removed or transferred either to some other industry or occupation within the country, which affords higher gains because untaxed, or it will be removed to another country where the same industry or occupation is not taxed. In other words, there is both an internal and an international migration of capital continually going on—a migration from industry to industry, or from country to country.

Capital will always seek to secure the usual returns. Impose a tax on the capitalist lender, and he will insist on an increase of the rate of interest tantamount to the tax, or else transfer his capital to some untaxed occupation, within or without the country.

But while it is abstractly true that a special tax on capital will be shifted to the borrower, it often happens in practice that the assumed absolute mobility of capital is countervailed by other forces—that is, by economic friction. These opposing forces may be classified as follows: (1) ignorance of the capitalist; (2) difficulty of removing the capital; (3) risk connected with the migration to other countries; (4) social or other considerations which make for permanence of investment; (5) legal obstacles. A word as to each of these:

Ignorance of the capitalist, let us confess it at once, is not of very material importance. In a highly developed industrial organism, under the modern régime of interchange of thought and communication of news, the fact of extraordinary profits in any particular occupation cannot be long concealed. And especially the distinction which concerns us here—that between taxed and untaxed capital—must be easily perceptible to the average investor. With the

growth of modern society the ignorance of the investor is a factor of continually decreasing moment.[1]

More important is the difficulty of removing capital to more lucrative employments. Of course, in the case of loanable capital, as in the stock exchanges of to-day, this difficulty is reduced to a minimum. But in proportion as the capital assumes more and more of a fixed character, its mobility grows gradually less. To transfer investments from one stock to another is a very different matter from abandoning all the plant and machinery in one business in order to enter upon another occupation.

The risk connected with investments in foreign countries is likewise not so great as it formerly was. It is indeed true that creditors, as a rule, prefer to be near their debtors. American capitalists prefer the less remunerative mortgages in the East to the high interest-paying investments in the western states. And it frequently happens that home investors or domestic corporations are treated more leniently, both as regards taxation and in other respects, than foreigners. It is the survival of the old law of aliens. But this check on interstate or international transfer of capital is gradually losing its potency.

Social considerations of various kinds often interpose a more serious obstacle. It is not always strictly true, as Adam Smith said, that "the proprietor of stock is properly a citizen of the world, and not attached to any particular country". Feelings of patriotism, of local pride, of desire of proximity to friends, of long custom and old usage sometimes play

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[1]For a proof that it is however of some importance, *cf.* Cliffe-Leslie on the Philosophical Method of Political Economy. In his "Essays in Political and Moral Philosophy", 235–237.

a considerable rôle. Although they may be called non-economic motives, they are none the less to be reckoned with by the economist.

Finally the law may prevent the free migration of capital. Under our state bank laws, *e. g.*, there was a very general provision that banks could invest their deposits only in certain specified state securities or mortgages. The large demand for state mortgages contributed toward lowering the usual interest allowed on the mortgage, and thus prevented the whole of the burden of the tax from being shifted to the borrower.

While, therefore, it may be laid down as a general rule that a tax on loanable capital will be shifted from the creditor to the debtor, yet the conditions which interfere with the absolutely free mobility of capital may be sufficiently strong to prevent this transference of the tax from becoming entirely complete. The application of this principle to the great question of taxation of mortgages in the United States is obvious.

3.—*The Incidence of a Capital Tax as between Producer and Consumer.*

This is practically the same as a tax on profits. The investor of capital in a productive industry does not make any but an arbitrary distinction between his interest and his profits on the investment. The rate of interest is fixed by the relative amount of loanable capital, i. e. it is a question between borrower and lender. But as soon as it becomes a question of adding the tax to the price of the goods the problem is the same as that of the tax on profits. And this topic is of sufficient importance to demand a separate chapter.

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[illegible] the incidence of a tax on profits as [illegible] producer and consumer, it is necessary to make several distinctions. Profits may be taxed [illegible] as when the tax is imposed on the net re[illegible] profits of the producer. But profits may [illegible] as in the case of a fixed [illegible] a tax on stock in trade, or a tax on sales. [illegible] however, may themselves be subdi[illegible] two categories. The producer may be [illegible] the amount of commodities produced or sold [illegible] This is equivalent to a so-called indirect [illegible] commodities. It is immaterial from the stand[illegible] whether such a tax is raised from [illegible] the consumer. On the other hand the [illegible] not on the quantity produced [illegible] gross receipts from sales—which is mani[illegible] means necessarily the same thing. [illegible] gross receipts is also an indirect tax on [illegible] some sort a cross between a tax on [illegible] a tax on the quantity sold.

[illegible] we use the term profits in the wider [illegible] the revenue which accrues from the [illegible] of commodities, there are really no [illegible] kinds of taxes, which affect pro[illegible] the relation between producer [illegible] These are:

[illegible] with gross production or gross [illegible]

II. A tax varying with gross receipts.

III. A tax varying with net receipts.

IV. A tax of fixed amount.

Before it will be possible to discuss the incidence of any of these taxes or, since profits depend on price, before we can ascertain the influence of taxes on price, it is necessary to notice four fundamental lines of division.

1. A distinction must be drawn between an exclusive tax which hits only one class of commodities or profits, and a general tax which hits all or most of the classes.

2. Commodities must be distinguished according as they are subject to the law of monopoly or to the law of competition. The incidence of taxes on competitive profits is not necessarily the same as the incidence of taxes on monopoly profits.

3. Commodities must be distinguished according as their production is subject to the law of diminishing returns, to the law of constant returns, or to the law of increasing returns.

4. Industries must be distinguished according as all the commodities in the class are produced at practically the same cost, or as some of the commodities are produced at varying costs.

The first two distinctions need no discussion. Their effect will be considered below. The remaining distinctions require a few words of comment.

It is well known that in certain occupations or under given conditions every successive dose of capital or labor applied will give returns of approximately equal amount. The product will be in exact ratio to the amount of capital or labor applied. The more capital, the more product, and *vice versâ*. The

of cost.[1] Successive applications of capital and labor this tend to produce returns which are, up a certain point, increasingly greater in amount. The product is not proportional, but progressive.

Now, whether the law be that of increasing or of diminishing returns, it is evident that the normal value of the articles in the class will be fixed, not by the average cost of production, but by the cost of producing the most expensive article. In other words, normal value tends to equal the highest cost of production. As long as the demand is sufficient to call into being commodities produced at different costs, the price will be fixed by the greatest cost; and those that produce more cheaply, because in larger or smaller quantities, as the case may be, will benefit accordingly.

But secondly, whether or not the industry obey the law of increasing or of diminishing returns, producers inevitably differ in ability or in opportunity. Although all the articles in the same class sell at the same price, and even though the law of returns be the same, the superior skill of some employers, or the more favorable situation of some factories, or the more fortunate combination of external causes, may enable some capitalists to produce more cheaply than others. As the price, again, is fixed by the law of greatest cost, the difference between greatest cost and actual cost, i. e., the difference between the cost of producing the article under the most disadvantageous and under the more favorable conditions constitutes the producer's surplus or profits. Even if the

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The important point for us here is that a large class of commodities—in fact, all competitive articles—are produced under such conditions that the profits—whether in whole or in part is immaterial for our present purposes—represent the result of differential advantages of production. These differences may be summed up under four headings: Differences of situation with reference to the market; differences in the possession of improved machines or processes; differences in the personal abilities of the producer, and differences in opportunity or luck. In other words, in discussing the incidence of a tax on competitive profits, whether direct or indirect, we are dealing with commodities which are produced at varying costs and where the normal value, or the value around which the market price oscilates, tends to equal the cost of these articles of the class produced under the most disadvantageous conditions. There is no such law of natural profits as the old school assumed, simply because the law of cost of production, rightly interpreted, means the law of greatest cost. There may indeed be average profits in the sense of a mean between no profits and maximum profits. But the normal or natural rate of profits does not exist.

In fact it may be said that whenever all the articles in a given class are produced at the same cost, the resulting profits must be monopoly profits and not competitive profits. Monopoly in so far as it exists at all implies exclusive control of the market. As soon as the control is no longer exclusive the ensuing profits are competitive profits. In a state of free competition, that is when the article is indefinitely reproducible, competition between the producers inevitably brings the price down to the cost of produc-

tion of the dearest increment: and it is only because there is a part produced at less expense that profits accrue to the producers of such cheaper part. But as soon as the article is no longer reproducible indefinitely, there is an element of monopoly, because the temporary possessors of the processes of production practically control the market. The price may be driven above the cost of production, and may remain there indefinitely, as long as the supply is necessarily limited. It is true, that a monopoly article may also be indefinitely reproducible, but it will then be a monopoly article only in so far as this indefinite reproduction is controlled by one producer. In other words, competition may be excluded in two ways—either by the fact that no more of the article can be produced, as in the case of a natural monopoly, or by the fact that only one producer controls the production, as in the case of a legal or an economic monopoly. Whether the industry obey the law of constant, increasing or diminishing returns, makes in this respect no difference: it is only in the case of monopolies that all the articles in a given class can be produced at the same cost. Competitive profits imply varying costs of production.[1]

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I. Taxes on Gross Production or Gross Amount Sold.

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Let us examine first the case of a special exclusive tax on all articles of a particular class, subject to the law of competition.

The tax must plainly be regarded as an increase in the cost of production. For the time being, of course, and until the old stock is exhausted, those who produced before the new tax was imposed benefit to the

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1. If the tax be levied on commodities which the consumers must have and are willing to pay for at any expense, the demand will not decrease. With demand that remains unchanged irrespective of price, the price will rise by just the amount of the tax. The consumer will thus bear the whole burden. Practically, of course, this is true of only a few commodities. But it may be said that in a large number of cases prices may rise considerably without appreciably affecting the demand. Such would be the case with absolute necessaries of life and with high-priced luxuries. The demand for absolute necessaries of

life is not apt to diminish much unless the people starve. The effect of a tax on such commodities would rather cause a diminution in the more elastic demand for comforts, or for the less absolute necessaries. But the demand for absolute necessities depends mainly on the amount of the population, not on the price of the article. Again, in the class of high-priced luxuries, a tax, unless it be exorbitant, is not apt to restrict the consumption. Those who are generally willing to buy such luxuries are not apt to be held back by an increase of price.

In fact, it may be laid down as a general rule that in the case of absolute necessities, as of expensive luxuries, great alteration of price goes hand-in-hand with slight variation in demand, while in the case of moderate comforts small change of price is accompanied with considerable variation in demand.[1] In cases then of articles like by absolute necessities and some expensive luxuries there will be no migration of capital from the industry, because profits will tend to remain at the old figure. The tax will in the extreme case be shifted in its entirety on the consumer.[2]

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In fact, it may be laid down as a general rule that in the case of absolute necessities, as of expensive luxuries, great alteration of price goes hand-in-hand with slight variation in demand, while in the case of moderate comforts small change of price is accompanied with considerable variation in demand.[1] In cases then of articles like by absolute necessities and some expensive luxuries there will be no migration of capital from the industry, because profits will tend to remain at the old figure. The tax will in the extreme case be shifted in its entirety on the consumer.[2]

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CHAPTER V.

TAXES ON PROFITS.

In discussing the incidence of a tax on profits as between producer and consumer, it is necessary to make several distinctions. Profits may be taxed directly, as when the tax is imposed on the net receipts or profits of the producer. But profits may also be taxed indirectly, as in the case of a fixed license, or a tax on stock in trade, or a tax on sales. Taxes on sales, however, may themselves be subdivided into two categories. The producer may be taxed on the amount of commodities produced or sold by him. This is equivalent to a so-called indirect tax on commodities. It is immaterial, from the standpoint of incidence, whether such a tax is raised from producer or the consumer. On the other hand the producer may be taxed not on the quantity produced but on the gross receipts from sales—which is manifestly not by any means necessarily the same thing. A tax on gross receipts is also an indirect tax on profits. It is in some sort a cross between a tax on net receipts and a tax on the quantity sold.

Consequently if we use the term profits in the wider sense to signify the revenue which accrues from the sale or exchange of commodities, there are really no less than four chief kinds of taxes, which affect profits and thus influence the relation between producer and consumer. These are:

I. A tax varying with gross production or gross amount sold.

II. A tax varying with gross receipts.
III. A tax varying with net receipts.
IV. A tax of fixed amount.

Before it will be possible to discuss the incidence of any of these taxes or, since profits depend on price, before we can ascertain the influence of taxes on price, it is necessary to notice four fundamental lines of division.

1. A distinction must be drawn between an exclusive tax which hits only one class of commodities or profits, and a general tax which hits all or most of the classes.

2. Commodities must be distinguished according as they are subject to the law of monopoly or to the law of competition. The incidence of taxes on competitive profits is not necessarily the same as the incidence of taxes on monopoly profits.

3. Commodities must be distinguished according as their production is subject to the law of diminishing returns, to the law of constant returns, or to the law of increasing returns.

4. Industries must be distinguished according as all the commodities in the class are produced at practically the same cost, or as some of the commodities are produced at varying costs.

The first two distinctions need no discussion. Their effect will be considered below. The remaining distinctions require a few words of comment.

It is well known that in certain occupations or under given conditions every successive dose of capital or labor applied will give returns of approximately equal amount. The product will be in exact ratio to the amount of capital or labor applied. The more capital, the more product, and *vice versâ*. The

industry is then said to be subject to the law of constant returns. The normal value of the article which is indefinitely reproducible at equal cost would hence tend to be equal to the cost of production, on the assumption that all the articles in the given class are produced at the same cost. But such an assumption is only rarely true in the competitive field. In actual life we do not find all the articles in a given class produced at the same cost, although in a given market they must all sell for the same price. In other words, although the normal market price is always the same, the normal supply price is not the same. The reason for this is twofold.

It has been repeatedly shown that in certain occupations every successive dose of capital applied will give returns, not of equal, but of continually smaller amount. The industry is then said to be subject to the law of diminishing returns. This is nominally true of agriculture and, to some extent, of the extractive industries. It forms the basis of the Ricardian law of economic rent. The law is true also of almost any industry after a certain stage of profitableness has been passed, and when the market will not respond proportionally to the efforts of the producer. On the other hand, the industry may obey the law of increasing returns up to a certain point. In nominally progressive commodities continual improvements are being made in methods of production, while the possession of capital renders its further increase a continually easier task. Moreover, where the proportion of fixed or constant expenses in any industry is large, a considerable increase of production can be made without a corresponding increase

of cost.[1] Successive applications of capital and labor this tend to produce returns which are, up a certain point, increasingly greater in amount. The product is not proportional, but progressive.

Now, whether the law be that of increasing or of diminishing returns, it is evident that the normal value of the articles in the class will be fixed, not by the average cost of production, but by the cost of producing the most expensive article. In other words, normal value tends to equal the highest cost of production. As long as the demand is sufficient to call into being commodities produced at different costs, the price will be fixed by the greatest cost; and those that produce more cheaply, because in larger or smaller quantities, as the case may be, will benefit accordingly.

But secondly, whether or not the industry obey the law of increasing or of diminishing returns, producers inevitably differ in ability or in opportunity. Although all the articles in the same class sell at the same price, and even though the law of returns be the same, the superior skill of some employers, or the more favorable situation of some factories, or the more fortunate combination of external causes, may enable some capitalists to produce more cheaply than others. As the price, again, is fixed by the law of greatest cost, the difference between greatest cost and actual cost, i. e., the difference between the cost of producing the article under the most disadvantageous and under the more favorable conditions constitutes the producer's surplus or profits. Even if the

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industry is subject to the law of constant returns, the profits due to superior skill or good fortune will arise in the same way.

The discussion as to the nature of profits is not yet ended. On the one hand we have the old school, which identifies profit with compensation for work and earnings of management, and lays down the law of normal or natural profits, which are supposed to stand in a close relation to normal or natural interest. On the other hand we have the various modern schools, all of which in a greater or less degree identify profits with surplus earnings, and thus logically deny the existence of any normal or natural profits. There are at least three separate modern schools. The one is that represented by Loria and Nazzani in Italy, and by Marshall in England. They still cling to the conception of ordinary profits as representing in some sense interest and compensation for work, but maintain that the surplus above these ordinary or minimum profits obey the law of rent. This is what Marshall means by quasi-rent, or Loria by surplus-profit (*sopra-reddito*).[1] Secondly, we have the school which generalizes the principle of rent and makes it cover profits and wages as well as agricultural rent. This is the school represented in Germany by Mangoldt, Schäffle and Held, and in the English-speaking countries in part by Senior (who termed rent a fortuitous profit), and in whole by recent writers like Clark and Hobson. Thirdly, there is the tendency represented by General Walker, who identifies all profits with the surplus or rent arising from business management.

[1] Loria, "La Rendita Fondiaria e la sua Elisione Naturale", 1880, and his "Analisi della Proprietà Capitalistà", Book I, 1889. *Cf.* Nazzani, "Saggi di Economia Politica", No. III, Del Profitto, 1881.

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2. If on the other hand the price of the commodity before imposition of the tax had already reached the limit of the effective demand, an attempt to increase the price by any portion of the tax would totally annihilate the demand. The commodity must be sold at the former price or not at all. Demand again, as long as it exists at all, does not change, and with unaltered demand price cannot rise. In such a case the tax could not be shifted at all. The whole weight of the tax would fall on the producer. This, in the long run, would involve a decrease in the production of the commodity. The old producers would lose, and no new capital would be invested. But even if the supply is diminished the price cannot increase, since by the supposition consumers will prefer to abandon the consumption rather than pay an increase of price. The net result would be a cessation of production with the intermediate loss to the owners of fixed capital in the business. Under no circumstances could the tax be shifted.

3. If, finally, the demand is elastic, as in the case of minor luxuries and all comforts—that is, of the general mass of commodities—in the sense that the old price before the imposition of the tax fell below what the consumers would at a pinch be willing to pay, but on the other hand that the new price, with the tax added, would exceed what certain of the consumers, at all events, can afford to pay, the tax will be divided between consumer and producer. The proportions in which this division will take place

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will then depend mainly on the elasticity of the demand. Given, however, a definite elasticity of demand, the proportions of the division between producer and consumer depend on another set of considerations, viz.: whether the industry obey the law of constant, increasing or diminishing returns. Let us analyze them separately.

If the industry is subject to the law of constant return, so that the cost of production is the same for all irrespective of quantities produced, the tendency of the producer will be to add the entire tax to the price. But as this would decrease sales, he will increase the price by something less than the full amount of the tax. If the demand will fall off greatly with every increase of price, or in other words if the margin of effective demand is very small, the price will be increased by much less than the amount of the tax and the producer will suffer the most loss. Conversely, if the demand is not so elastic,—if an increase of price will produce only a small decrease of demand—almost the whole of the tax will be added, and the consumer will suffer more than the producer. But as long as the gradual decrease of the demand is fixed and ascertainable, the increase of price will bear a definite proportion to the amount of the tax.

If, however, the industry obeys the law of diminishing returns—when every additional increment of production costs relatively more—the tendency of the producer will be to add less of the tax to the price than in the preceding case. For as soon as he adds any given part of the tax to the price he will decrease consumption. But if he produces less, each unit will on the supposition of diminishing return

cost him less than before. Since price is fixed by cost, the price will now be lower than before. In other words, the producer will tend to raise prices as little as possible, and will thus bear more of the tax himself. Whether the demand be more or less elastic, the consumer will bear less of the burden than in the preceding case of constant return.

Finally if the industry obeys the law of increasing return—when every increment in the amount produced costs relatively less—the producer will tend to add more of the tax to the price of the commodity. For the increase of price consequent on the tax will tend as before to decrease consumption. But decreased consumption will now increase the cost per unit produced, and this increased cost must inevitably bring about an enhanced price. The producer at the margin of production will thus be apt to add more of the tax to the price, than if the industry obeyed the law of constant return. The consumer will bear a larger proportion of the loss than before. Whether the consumer's loss will be absolutely more or less than the producer's will depend as before on the elasticity of the demand. But the consumer's loss will be relatively more than in the case of either constant or diminishing return.

We may, therefore, sum up this part of the discussion by saying that the degree to which a tax will be shifted on the consumer will vary inversely as the elasticity of the demand, and directly as the ratio of product to cost. Whether the tax will be shifted in its entirety, in part, or not at all, depends on the article itself and the nature of the industry on whose product the tax is laid. The effect of a bounty, and the degree to which its benefits accrue to producer

and consumer, *i. e.* its incidence, will, of course, be exactly the reverse of the effect of a tax.

If we wish to analyze the further effects of the shifting of such a tax on gross product or on commodities in so far as the ultimate economic effects are concerned, an interesting field is open to us.

If we regard the revenue of the community as a whole we may distinguish, with Cournot, between the real and the nominal revenue, and say that the imposition of a tax may effect a diminution of production and thus of real revenue, while the nominal revenue of society may be either increased or diminished, as the case may be.[1] The distinction can best be explained by an example. Suppose that the price of the commodity was originally $10, at which price 10,000 pieces were sold. Now, a tax of $2 is imposed, all of which is shifted to the consumer. At the new price $12, however, only 8,000 pieces will be sold. The total returns to the producer thus decrease from $100,000 to $96,000, a loss of $4,000. Now the effect on the consumer is also marked. The 8,000 permanent consumers each pay $2 more, which they would otherwise have devoted to the purchase of other goods, that is $16,000. On the other hand the 2,000 old consumers now spend their $10 in something else, that is a total of $20,000. The total sum then devoted to other purchases is $20,000—$16,000=$4,000, a sum equal to the loss of the producer of the taxed article. Since, however, the permanent consumers now pay $96,000 for what they formerly bought at $80,000 there is a real loss of $16,000. The producers also lose $4,000, as has

[1]Cournot, De l'influence des prix sur les revenus, "Principes", *etc.*, 297.

been said. Thus the diminution in the real revenue is \$16,000+\$4,000=\$20,000, while the diminution in the nominal revenue is \$4,000. In such a case then there is a diminution in both real and nominal revenue.

But if the conditions of elasticity of demand were such that 9,000 pieces, instead of 8,000, would be sold at the increased price of \$12 the matter is different. In this case the nominal revenue would have increased by \$8,000, since the producer now obtains \$108,000 instead \$100,000, But the permanent consumers now pay \$18,000 (9,000 x 2) more than before. If we deduct the producer's gain from the consumer's loss we have a net real loss of \$10,000. Thus in this case while there has been an increase in the nominal revenue, there has been a decrease in real revenue. The effect of a bounty would be just the reverse of a tax. There might be a diminution in the nominal revenue with an increase or a diminution in the actual revenue of society.

Another interesting point, of some practical importance, is the relation between the gross proceeds of the tax and the loss occasioned to the consumers as a class in all those cases, of general occurrence, where the price is increased by reason of the tax.

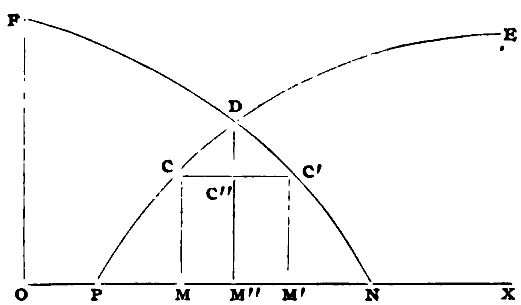
In the case of an industry which obeys the law of constant returns, the proceeds of the tax plainly equal the loss to those that consume the article. If, however, we introduce the idea of what Marshall calls the consumer's rent, *i. e.*, the gain that accrues to the consumer in buying for a given price what is really worth more to him, the matter is a little different. The proceeds of the tax will then be less than the loss of consumer's rent. For the permanent consumers, as has been said, lose what the tax brings in,

while the former consumers, who are now unable to consume, have also suffered a loss, but pay nothing to the state.

But if the industry obey the law of increasing return, the loss to consumers is still greater. For the increased price due to the tax diminishes the production, and at the same time increases the cost of each article produced. Thus the price will rise by a much larger proportion of the tax. The permanent consumers alone will, therefore, lose more than the proceeds of the tax, while the former consumers, as before, also suffer a loss.

Finally, if the industry obey the law of diminishing returns, the loss to the consumers will be less than in the case of constant returns, and may or may not exceed the proceeds of the tax; for, although the tax would tend to increase price, the diminution in sales will decrease the general cost, so that the price may increase by something less than the tax. Whether or not this is true, depends on the height of the tax as compared with the diminution in the cost of the production.[1]

[1]The above reasoning may be illustrated graphically as well as arithmetically. Fleeming Jenkin, "On the Principles which Regulate the Incidence of Taxes". (Proceedings of Royal Society of Edinburgh, Session 1871–72, p. 624), made use of the following diagram:



(See explanation of diagram on next page.)

There is one important point in which almost all writers have committed a great error. Cournot maintained that a tax, whether on a monopoly or a competitive commodity, may raise the price to an extent greater than the amount of the tax. The reason he advanced for this phenomenon was that the price paid by the consumer must include not only the tax, but the interest on the sum necessary to pay the tax, and the profits of the middlemen. Hence the necessary conclusion that it is always wiser to assess the tax at as late a stage as possible—that is, on the consumer himself—since the collection of the tax becomes more costly, more vexatious, more burdensome to the community in proportion as the assessment of the tax approaches the producers. The con-

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F N is the demand curve, P E the supply curve, $C\,C'$ the amount of tax per unit. Then OM is the market price to the supplier, OM′ the market price to the buyer, and $M\,M'$ the tax.

The amount raised by the tax is $M\ C\ C'\ M'$, the portion paid by the seller $C\ C''\ M''\ M$, the portion paid by the buyer $C''\ C'\ M'\ M''$. The whole loss to the consumer is $M\ C\ D\ C'\ M'$; the loss to the sellers C D M″ N, the loss to the buyers M″ D C′ M′. Both buyers and sellers suffer a loss beyond the tax. The sellers suffer a loss C C″ D; the buyers suffer a loss C′ C″ D. If the tax is large C C′ will approach the axis O X. Then the tax will be unproductive, and the excess of loss to buyers and sellers, C C″ D, will be large. Of course, if the industry obeys the law of constant return, or of increasing returns, the supply curve P E will be parallel to O N or curved the other way. Conversely, according to the elasticity of the demand, the demand curve FN will tend to be parallel to EO, Mr. Jenkin did not modify his figure to meet these conditions. But Professor Marshall, who has adopted the idea, has made the necessary changes in the diagrams in his "Principles of Economics", pp. 446–449, to which the reader is referred.

Marshall, however, applied his diagrams only to consumers' rent, *i.e.* to what Jenkin called C′ C″ D. Of course it is equally applicable to the producers' rent. The whole analysis is already outlined by Cournot in his "Principes Mathématiques", 78–82, and more especially in his "Principes de la Théorie des Richesses", 374–378. He

sumers will have to pay more than the government receives.[1]

This theory, which Cournot invested with elaborate apparatus of mathematical diagrams, is, however, nothing but the accepted doctrine of Adam Smith, Ricardo and Mill. Adam Smith puts the idea into the plainest form when he says:

"A tax upon these articles [necessaries of life] necessarily raises their price somewhat higher than the amount of the tax, because the dealer, who advances the tax, must generally get it back with a profit. His employer, if he is a manufacturer, will charge upon the price of his goods this rise of wages, together with a profit, so that the final payment of the tax, together with this exchange, will fall upon the consumer. The final payment of both the one and the other [taxes on necessaries and on labor] falls altogether on themselves [the consumers,] and always with a considerable overcharge."[2]

So also this is what Ricardo means when he says that "the taxing of all commodities will raise the price by a sum at least equal to the tax,"[3]—a remark which, as we have seen, is by no means necessarily

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uses both algebraic formulæ and mathematical diagrams. In fact, here as in so many other questions of pure theory, the quantitative relations can best be analyzed by the mathematical method. But this method alone is not sufficient to give the practical results which it is the object of these papers to attain.

[1]Cournot, "Principes Mathématiques", 78 (as to monopolies). "Principes de la Theórie des Richesses", 273 (as to competitive articles).

[2]"Wealth of Nations", Book V, Chap. ii, Rogers' Edition, Vol. II, p. 468–470.

[3]"Principles of Political Economy and Taxation". Chapter 17, p. 186 (McCulloch Edition). *Cf.* Mill, "Principles", Book V, Chap. iv, § 2.

true. So DuPuynode, Parieu and many other writers make the same mistake. Fawcett calls this the most serious objection against taxes on commodities.[1]

This whole theory rests on the old doctrine of normal or natural profits. As soon as we remember that, according to the modern theory, profits are simply the surplus over market cost, the doctrine falls to the ground. The middleman cannot add his profits to the price, because in a state of competition price is always fixed by the cost of the most expensive increment, *i. e.*, in the case of the middleman by the no-profits middleman. If there were such a thing as natural profits, of course the price of the article would be increased in each transfer, until the ultimate price might immensely exceed the tax. But it is always the producer or middleman on the margin of production, *i. e.*, he who produces or handles the product without profits by simply getting back his expenses, that fixes the price. The profits are obtained only by the more fortunate or skillful individuals. The mere fact of the transfer of the product through a number of hands cannot in itself possibly raise the price by more than the exact cost of such transference, and cost does not include profits. Cost is the condition of profit. Otherwise retail prices would increase geometrically, according to the number of retailers, which is plainly absurd. The tax is simply an addition to cost of production, and there can be no geometrical increase in the tax. As soon as we abandon the natural profits theory, we see how impossible is the excess-of-price-above-tax

[1] Du Puynode, "De la Monnaie, du Crédit et de l' Impôt", II, 210; Parieu, "Traité des Impôts", I, 165; Sayer, "The Income Tax", 1833, p. 58–59; Fawcett, "Political Economy", 550–551 (6th Edition).

doctrine. The doctrine assumes not only that the producer is a monopolist, but that every middleman is a monopolist also. Only on this assumption can there be no no-profits middleman. But the assumption is not a practicable one in actual life.[1]

There is, indeed, one way, but only one way, in which the price of an article may be driven up beyond the amount of the tax—a way, suggested in the last sentence, but owing to reasons very different from those advanced by Adam Smith and Cournot. Since a tax on production or on commodities must generally be advanced before the producer has received payment for his sales, the necessity of raising the funds will bear more heavily on the smaller producers. In fact, under given conditions of elasticity of demand, such a tax, especially if it be a high tax, tends to increase the advantages of the powerful producer. When the conditions are sufficiently favorable, the imposition of a tax may thus be the direct cause of the creation of monopoly. It is, thus, directly the monopoly, and indirectly the tax, which enables the producer to raise the price far above its previous amount. Conversely the repeal of a tax may reduce the price by an amount far greater than the tax, because what was formerly a monopoly now becomes subject to competition. As a glaring example of this tendency may be mentioned the tax on matches in the United States during the Civil War, the imposition of which created a monopoly, and the abolition of which caused a fall in price considerably greater than the amount of the tax. So again we find that the proposed reduction of taxes

[1] *Cf.* Gunton, "Principles of Social Economics", 380. His conclusions are in other respects, however, questionable.

on certain commodities like tobàcco is opposed in in the United States by the large manufacturers and importers. The higher the tax, the greater the advantage of the large dealer. But it is primarily because of the monopoly, and only indirectly because of the tax, that prices are raised thus unduly. And this brings us to the next branch of our investigation.

Up to this point we have been considering only those commodities subject to the law of competition. How does the matter stand with articles subject to the law of monopoly?

In most respects the law of monopoly value is different from that of competitive value. The monopolist will always demand the very highest price at which he can sell the greatest number of products. He will be entirely uninfluenced by the fact that the article can be produced more cheaply—a consideration of vital importance in the whole domain of competitive prices. But in as far as concerns the incidence of the particular tax with which we are at present dealing—namely, the tax on gross production or on commodities—the monopolist and the competitive producer are subject to practically the same influences.

If a tax is imposed on every article produced, the monopolist may prefer to restrict his production and raise his price. Although he will sell less than before, because of the increased price, yet his net profits may be larger because he pays a smaller tax than he would if he produced more extensively. Although his gross receipts diminish, his expenses diminish still more. If the tax is small and the demand apt to fall off a great deal with increased price, the monopolist will be likely

to find it profitable to bear the tax himself. If, as is generally the case, the demand be more stable, he will be apt to shift more and more of the tax to the consumer, for the reason just explained. The degree to which he will add the tax to the price depends chiefly on the height of the tax, as compared with the extent of the production and the elasticity of the demand. And, of course, the same qualifications are to be introduced as before, according as the monopoly industry obeys the law of the constant, diminishing or increasing returns.

The important point to be noticed is that in the case of taxation of gross product the monopolist may, and generally will, shift the tax to the consumer. We shall see very soon that in the case of other taxes there is a sharp line of distinction between monopoly price and competitive price, as regards the question of incidence.

The whole question of the incidence of import or export duties is virtually identical with the one discussed in the preceding cases. It will be readily seen, therefore, how erroneous is the doctrine of those extremists who maintain that the loss to the consumer is measured by the proceeds of the import duties. On the contrary, it may often happen that prices increase something less than the tax, and in certain cases that prices do not increase at all. When the foreign producer fears that the increase of price by the total amount of the tax will so materially reduce his sales as to render his net profits lower than they would be if he assumed a part of the tax himself, prices will rise by something less than the tax. In the recent case of the McKinley tariff, *e. g.*, we have seen that the price of imported

Sumatra tobacco has risen by only a fraction of the tax. The foreign producer has voluntarily assumed the greater part. On the other hand, again, it may, of course, happen that the loss to the consumer will be more than the amount of the tax. It is impossible to lay down any exact and universal rule apart from the given conditions of the particular case. The general tendency is that represented in the conclusion mentioned above.

II.—Taxes on Gross Receipts.

A tax on gross receipts must not be confounded with a tax on sales (in the sense of a tax proportional to the number of commodities sold), or with a tax on gross product. A tax on sales or on product varies with the amount sold or produced. But gross receipts may be larger with small sales than with large sales, provided prices are higher. In such a case a tax on gross receipts would vary just inversely as a tax on the gross amount sold. Conversely, gross receipts may be smaller with large sales than with small sales, provided prices are lower.

If we take up first the case of a monopoly, it is plain that a tax on monopoly gross receipts can never be shifted. We must remember that the price of a monopoly article will always be such that the greatest number of commodities can be sold at such a price as to afford the maximum monopoly revenue. Let us suppose that the monopolist has been selling 1,000 articles at $1.00, giving him gross receipts of $10,000, receipts which form his maximum monopoly revenue. Now a tax of ten per cent. is imposed on gross receipts. Let us assume that the monopolist will attempt to add the

whole or any part of the tax to the price and charge any sum between $1.01 and $1.10. Now at any of these prices he will not get quite $10,000 gross receipts, and certainly not more than $10,000, for otherwise he would have advanced the price already before the tax. Suppose, to give him the benefit of the doubt, that he now sells $9,990 worth. Since he must pay $99.90 tax this would leave him only $9,890.10, while if he continues to charge only $1, he would still have $10,000—100=$9,900. Thus it will be profitable for the producer to bear the whole burden himself. The tax cannot be shifted to the consumer, either in whole or in part.[1]

In the case of competition, however, the incidence of the tax is different. In the case of competition there can be only one price in the market—the price fixed by the cost of the production of the dearest increment of the necessary supply. Now, a tax on gross receipts necessarily increases the expenses of this dearest increment. The producer at the margin of profitable production—that is, the producer whose cost fixes the price, and whose gross receipts afford him only a bare return for his outlay, without any profits—this producer must add the tax to his price, for otherwise his gross receipts, with the tax deducted, will involve him in positive loss. In the long run, therefore the tax must be shifted, but the extent to which the tax will be shifted at any particular time will depend, again, on the very same considerations that were discussed in the case of a tax on gross product, *i. e.*, on the elasticity of demand,

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[1] Most writers, including Marshall ("Principles", 460) and Pantaleoni ("Traslazione", 76), overlook this, and confuse a tax on gross receipts with a tax on sales or amount produced.

and the relation of product to cost. In other words, while the incidence of a tax on monopoly gross receipts is the opposite of that of a tax on sales, the incidence of a tax on competitive gross receipts is the same as that of a tax on sales.

III.—Taxes on Net Receipts or Profits.

In the case of a tax on the net profits of a monopolist, it might be assumed that the tax will always be shifted to the consumer, because of his necessary dependence on the monopolist. But this assumption is completely false. It makes no difference whether the monopolized commodity is one the supply of which is strictly limited, and which is not reproducible at all, or whether the commodity is reproducible according to the law of constant, diminishing or increasing returns. So far as the producer is concerned, he cannot possibly add the tax to the price; for it is to be assumed that the monopolist producer will always demand the highest price which the consumer is willing to give. If the consumers were willing to pay more, he would have increased the price already before the imposition of the tax. In other words, monopoly price is always at the point of greatest monopoly profits. A tax on these profits can never increase price, because such increased price would no longer be consistent with the maximum monopoly revenue. A tax on monopoly profits must, therefore, fall wholly on the monopolist.

In the case of competitive net receipts, we must distinguish between an exclusive and a general tax on profits. A tax on the profits of some particular occupation must, in the long run, be shifted to the

consumer, provided that the commodity continue to be produced at all; for if the tax rested on the particular profits, the producer would be put at a disadvantage as compared with those engaged in other industries. There would be a gradual migration of capital to find the most profitable level, and the original industry would gradually be deserted. In the long run, therefore, either the tax will be shifted to the consumer, or it will lead to a cessation of production. In the one case, consumers suffer through increase of price; in the other case, they suffer through destruction of consumption. But in no case will the burden ultimately rest on the per-permanent producer.

But we must not forget the following important practical point, which has been entirely overlooked by the classical economists. In so far as the theory of mobility of capital is not applicable, "the long run" will not occur. When the fixed capital forms a large part, and the circulating capital a small part, of the entire investment, the only method in which a final equilibrium can be brought about is through the ruin and disappearance of the producer. Even where the transferability of capital holds good as a doctrine, the intermediate effects are often precisely the important ones. What may be in a sense unimportant from the standpoint of national economy, may be supremely important from the standpoint of individual economy. The word producer is used in two different senses. When we say that taxes cannot in the long run remain on the producer, we generalize the conception. The producer is not any actual individual, but represents a class or a set of individuals who never die or disappear. But when

we speak of a producer during any interval, we refer to certain individuals. The welfare of producers as a class is something very different from the welfare of an actual producer. Producers as a class may contrive to obtain certain average returns, but it may be possible only through the complete ruin of the actual individuals who are now engaged in production. And in so far as inequalities of taxation are not constant inequalities, the process will continually repeat itself. The optimistic theory is as out of place here as it is in the other domains of economic science.[1]

In other words, even an exclusive tax on profits may at any given time rest on the original tax-payer, and can often not be shifted by him to the consumer.[2]

[1] *Cf. supra*, p. 101, the discussion of the incidence of the tax on the net profits of land.

[2] The qualification to the general doctrine as to the incidence of exclusive taxes is admirably expressed by Cliffe-Leslie in the following passage: "Another incidence of a number of taxes on the working classes as producers has been concealed by the doctrine that taxes on particular commodities and particular employments fall on consumers only, not on producers. The theory of taxation abounds in examples of the danger of the abstract and hypothetical method of reasoning in economics. The economist sets out with an assumption surrounded with conditions and qualifications, perhaps itself open to the question, such as that in the long run, and in the average, the profits of different occupations tend to equality, and presently forgetting all his qualifications and conditions, concludes that the profits of individuals must be equal, and therefore all special taxes advanced by the producer must come back to them with equal or average profit. Individual profits really, in almost every business, vary from enormous gains to absolute loss. Mill says 'that equal capitals give equal profits, as a general maxim of trade, would be as false as that equal age and size give equal bodily strength.' Nevertheless it is taken for granted that every special tax on a business is received 'with average profit,' though the net result of all a trader's advances is not infrequently ruin; though all such taxes give an advantage to the larger capitalists. . . . ."

The Incidence of Imperial and Local Taxation on the Working Classes. In "Essays on Moral and Political Philosophy", p. [illegible].

A general or universal tax on profits in the sense of an equal tax on profits does not, strictly speaking, exist any more than an equal or general tax on all capital.[1] But the tax may practically affect so many classes of producers in a given community, and so many different kinds of profits more or less removed from liability to competition from foreign sources, that we are justified in setting up the conception of a general tax, as over against an exclusive tax, on profits.

A general tax on net profits can never be shifted. If profits represent the surplus above cost of production a general tax on this surplus cannot influence the cost of production. Price cannot be altered, and the interests of the consumer cannot be affected. It is the producer who bears the tax, both immediately and ultimately.

Some writers, indeed, like Cournot, have asserted that the ultimate effects on the consumer may be bad, because the tax restricts the producers' consumption, and because the employment of the proceeds of the tax is generally less profitable than if the proceeds had remained in the hands of the producer. But this reasoning is very defective. It takes for granted that taxes are used unproductively, and it logically leads to the aphorism of Say that the best taxation is that which is least in amount. In so far as governmental expenditures are necessary and judicious, they are useful and productive; and it is entirely gratuitous to assume that private expenditure is more beneficial than public expenditure. Everything depends on the nature of the expenditure, and the general views as to the duty and limits of governmental activity. To say that a tax on profits is injurious to the consumer

[1] See *supra*, p. 137.

is a total begging of the question. The whole question, moreover, is not peculiar to a tax on profits, nor is it any longer a problem of incidence; it belongs properly to the wider discussion of the general influence of taxation.

One practical inference from the above discussion may be used in connection with the controversy in the United States as to whether corporation taxes should be levied on gross or on net receipts. In the case of pure monopolies it makes, as we see, no difference, in so far as the result on the consumers is concerned; but in the vast majority of corporations, the *a priori* conclusion in favor of a taxation of net receipts[1] is strengthened by the results of this discussion. Even in the particular case of transportation companies, where many of the charges are still competitive charges, it is far more likely that the travelers and shippers will feel a tax on gross receipts, than they would a tax on net receipts.

IV.—Taxes of Fixed Amount.

It may happen that a tax is assessed neither according to net profits, gross receipts or sales, but that it is imposed in the shape of a lump sum on all the producers in the industry. That is the common, although not the universal, rule with the American license taxes. No matter how large the profits, the tax remains the same.

In the case of a monopoly, such a tax necessarily falls on the monopoly profits. The tax cannot be shifted for the very same reasons that were advanced

[1] See my article on "The Taxation of Corporations", *Political Science Quarterly*, Vol. V.

above in the discussion of a tax on monopoly gross or net receipts. It is always the monopoly revenue that suffers.

In the case of competition, the tax is a condition precedent to production. It might be inferred that the tax would therefore be an addition to necessary cost of production, and that it would hence be shifted to the consumer. But this is not the case. For we have already seen that a tax on gross product favors the large producer. Much more inimical to the small producer is a tax of fixed amount. For the large producer would here pay absolutely no more than his small competitor. Hence, provided the commodities are reproducible to any extent, the large producer would prefer to assume the tax and recoup himself by capturing the customers of the smaller dealer. The minor producer who is thus unable to add the tax to the price will be crowded out of existence. Thus the fixed license tax, provided it be high enough, will tend to be borne by the producer, until, indeed, the gradual trend toward monopoly, fostered by the tax, may produce a rise of price, and thus affect the interests of the customer. But here again it would be only indirectly the tax that would produce the rise of price. But it may frequently happen that the price will not rise at all, the increased sales of the fewer producers compensating them for the tax which they pay. In such a case as this, the incidence of the tax may in a certain sense be declared to be neither on the consumers nor on the producers who continue to produce permanently after the imposition of a tax. The whole tax is discounted and borne by the unfortunate producers who are crowded out of existence. Thus the system of high liquor licenses in the

we speak of a producer during any interval, we refer to certain individuals. The welfare of producers as a class is something very different from the welfare of an actual producer. Producers as a class may contrive to obtain certain average returns, but it may be possible only through the complete ruin of the actual individuals who are now engaged in production. And in so far as inequalities of taxation are not constant inequalities, the process will continually repeat itself. The optimistic theory is as out of place here as it is in the other domains of economic science.[1]

In other words, even an exclusive tax on profits may at any given time rest on the original tax-payer, and can often not be shifted by him to the consumer.[2]

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[2] The qualification to the general doctrine as to the incidence of exclusive taxes is admirably expressed by Cliffe-Leslie in the following passage: "Another incidence of a number of taxes on the working classes as producers has been concealed by the doctrine that taxes on particular commodities and particular employments fall on consumers only, not on producers. The theory of taxation abounds in examples of the danger of the abstract and hypothetical method of reasoning in economics. The economist sets out with an assumption surrounded with conditions and qualifications, perhaps itself open to the question, such as that in the long run, and in the average, the profits of different occupations tend to equality, and presently forgetting all his qualifications and conditions, concludes that the profits of individuals must be equal, and therefore all special taxes advanced by the producer must come back to them with equal or average profit. Individual profits really, in almost every business, vary from enormous gains to absolute loss. Mill says 'that equal capitals give equal profits, as a general maxim of trade, would be as false as that equal age and size give equal bodily strength.' Nevertheless it is taken for granted that every special tax on a business is received 'with average profit,' though the net result of all a trader's advances is not infrequently ruin; though all such taxes give an advantage to the larger capitalists. . . . ."

The Incidence of Imperial and Local Taxation on the Working Classes. In "Essays on Moral and Political Philosophy", p. 196.

A general or universal tax on profits in the sense of an equal tax on profits does not, strictly speaking, exist any more than an equal or general tax on all capital.[1] But the tax may practically affect so many classes of producers in a given community, and so many different kinds of profits more or less removed from liability to competition from foreign sources, that we are justified in setting up the conception of a general tax, as over against an exclusive tax, on profits.

A general tax on net profits can never be shifted. If profits represent the surplus above cost of production a general tax on this surplus cannot influence the cost of production. Price cannot be altered, and the interests of the consumer cannot be affected. It is the producer who bears the tax, both immediately and ultimately.

Some writers, indeed, like Cournot, have asserted that the ultimate effects on the consumer may be bad, because the tax restricts the producers' consumption, and because the employment of the proceeds of the tax is generally less profitable than if the proceeds had remained in the hands of the producer. But this reasoning is very defective. It takes for granted that taxes are used unproductively, and it logically leads to the aphorism of Say that the best taxation is that which is least in amount. In so far as governmental expenditures are necessary and judicious, they are useful and productive; and it is entirely gratuitous to assume that private expenditure is more beneficial than public expenditure. Everything depends on the nature of the expenditure, and the general views as to the duty and limits of governmental activity. To say that a tax on profits is injurious to the consumer

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[1] See *supra*, p. 137.

is a total begging of the question. The whole question, moreover, is not peculiar to a tax on profits, nor is it any longer a problem of incidence; it belongs properly to the wider discussion of the general influence of taxation.

One practical inference from the above discussion may be used in connection with the controversy in the United States as to whether corporation taxes should be levied on gross or on net receipts. In the case of pure monopolies it makes, as we see, no difference, in so far as the result on the consumers is concerned; but in the vast majority of corporations, the *a priori* conclusion in favor of a taxation of net receipts[1] is strengthened by the results of this discussion. Even in the particular case of transportation companies, where many of the charges are still competitive charges, it is far more likely that the travelers and shippers will feel a tax on gross receipts, than they would a tax on net receipts.

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In the case of a monopoly, such a tax necessarily falls on the monopoly profits. The tax cannot be shifted for the very same reasons that were advanced

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above in the discussion of a tax on monopoly gross or net receipts. It is always the monopoly revenue that suffers.

In the case of competition, the tax is a condition precedent to production. It might be inferred that the tax would therefore be an addition to necessary cost of production, and that it would hence be shifted to the consumer. But this is not the case. For we have already seen that a tax on gross product favors the large producer. Much more inimical to the small producer is a tax of fixed amount. For the large producer would here pay absolutely no more than his small competitor. Hence, provided the commodities are reproducible to any extent, the large producer would prefer to assume the tax and recoup himself by capturing the customers of the smaller dealer. The minor producer who is thus unable to add the tax to the price will be crowded out of existence. Thus the fixed license tax, provided it be high enough, will tend to be borne by the producer, until, indeed, the gradual trend toward monopoly, fostered by the tax, may produce a rise of price, and thus affect the interests of the customer. But here again it would be only indirectly the tax that would produce the rise of price. But it may frequently happen that the price will not rise at all, the increased sales of the fewer producers compensating them for the tax which they pay. In such a case as this, the incidence of the tax may in a certain sense be declared to be neither on the consumers nor on the producers who continue to produce permanently after the imposition of a tax. The whole tax is discounted and borne by the unfortunate producers who are crowded out of existence. Thus the system of high liquor licenses in the

United States does not necessarily result in any increased price to the consumer, but in a diminution of the saloons and the gradual monopolization of the trade into the hands of the wealthier individuals. The producer always pays the tax. The consumer may or may not be affected ultimately.

Of course when the so-called license taxes are not fixed in amount, but vary with gross receipts or gross produce or net profits, the incidence is governed by the rules laid down in the preceding paragraphs. The word "license" covers a multitude of very distinct taxes.

If we sum up the preceding discussion we find that the incidence of a tax on monopoly revenue is always on the producer, except in the case when the tax is proportioned to the amount produced; that a general tax, whether fixed or proportional to competitive net receipts, rests on the producer; and that a round-about tax on competitive profits in the shape of a tax on gross receipts or gross produce may or may not be shifted to the consumer, in the sense that the shifting will vary inversely as the elasticity of the demand and directly as the ratio of product to cost—with the chances in the great majority of cases that the whole, or almost the whole, of the tax will be so shifted.

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Business taxes in general, including the so-called license taxes, should be levied according to net receipts. The so-called license taxes, when of fixed amount, further the trend to monopoly, and when graduated according to sales tend to be shifted to the consumer.

Internal revenue taxes, like import duties, tend to be shifted to the consumer. But the degree to which they will be shifted depends on the three points: (1) whether the business is of a monopoly or competitive nature; (2) whether the elasticity of demand is great or small, and (3) whether the relation of product to cost is constant or not. There is always a possibility that a portion of the tax may rest on the producer.

The application of the general principles of profits taxation to land, houses, debts and mortgages has already been made in preceding chapters, and needs no further discussion.

CHAPTER VI.

TAXES ON WAGES.

It has been customary since the time of Adam Smith to make a distinction between the wages of ordinary labor and what he calls "the recompense of ingenious artists and men of liberal professions". Let us take up first the incidence of a tax on the latter class. Adam Smith maintained that a tax on such skilled employments would be shifted, because this recompense "necessarily keeps a certain proportion to the emoluments of inferior trades.[1] Unless their recompense increased by the amount of the tax, these professions "being no longer on a level with other trades, would be so much deserted that they would soon return to that level".

On the other hand John Stuart Mill maintained that all the skilled and privileged employments are taken out of the sphere of competition by a natural or conferred monopoly, and that a tax will always fall on them because they have no means of relieving themselves at the expense of any other class.[2]

Which of these two statements is correct? It would seem that in the main Mill is right, although his reasons are not above criticism. It is true that the earnings of professionals are in general regulated by custom rather than competition. And for a large class the superior earnings must be regarded in the

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light of quasi-rents, as Marshall terms them. A great prima-donna, an eminent surgeon, a famous lawyer, will not receive or charge more for their services if a tax be imposed on the class to which they belong. A tax to them simply means a burden which cannot be shifted. Their earnings would be the same if the tax had not been imposed. Moreover, the whole class of professional workers is in many respects subject to influences of a more or less uneconomic kind. Their motive is frequently not pecuniary gain, but something higher. An actor, a painter, a doctor, a lawyer often adopts his profession with other objects in view than simply making his living or obtaining the greatest possible income. It is not so long ago that the recompense to certain professionals, like doctors, was regarded simply as a gratuity, not as a stipulated or legally enforceable sum. But even if we regard them from the purely economic standpoint we cannot say that their recompense bears any necessary proportion to common wages. The earnings of the liberal professions are not dependent on cost of production. It is only by a perversion of words and facts that we can consider the time and efforts spent in educating a member of a profession as a capital which must bring in so much interest. In fact, the universal outcry now is the overfilling of the professions, not because of the hope of greater earnings but because of compulsory education and general social conditions. The forces which keep the price of labor in general at a certain level do not operate with equal effect in this case. The price of labor in professional occupations, in short, is not competitive, but either customary or monopolistic.

The whole class of salaried public officials are in a similar category. For governmental salaries depend primarily on the relative desirability of governmental service and on the consideration of imagined political expediency. They may be highest in countries where the usual level of wages is lowest. And even if it were not so, it would be hard to say on whom a tax on official salaries could be shifted. Not on the employer or government surely, because the government does not enter the market as a producer, or according to any commercial principles. If the tax be sufficiently high to render the position undesirable, it may result in less efficient, and therefore in the long run more expensive, work. The community at large will suffer from a poor civil service. But the tax as such cannot possibly be shifted.

When, however, we come to the ordinary wages of the common artisan, whether skilled or unskilled, the matter is not so simple.

We have seen that the absolute theory of Ricardo and his followers maintains that a direct tax on wages would fall on profits, because wages are necessarily fixed by the cost of living or the standard of life. But in the course of our sketch of the history of the doctrine, we learned some of the objections made to this theory. The objections may be summed up as follows:

1. It is assumed that laborers will not consent to accept a reduction in their standard of life. But this is entirely a question of power between the wage-earner and the employer. It is impossible to say in advance who will win. If wages were actually fixed by the bare minimum of subsistence, then, indeed,

a tax on wages would necessarily be shifted; and although Ricardo was not, properly speaking, a believer in the iron law of wages, yet he makes use of this very argument to prove his point. The fact is that wages nowhere are at this point of bare sbsistence. The standard of life is everywhere above this limit. And there is no convincing reason for supposing that a tax may not encroach on the surplus between this limit and the actual standard of wages. The standard of life is not something fixed and adamantine. An irruption of low-priced immigrants would inevitably lower the standard of life and the general rate of wages, other things being equal. So also a tax on wages which would, at all events at first, fall on the laborer might equally well lower his standard of life, by making it impossible for him to procure the conveniences to which he had previously been accustomed. The wage-earner would, of course, strive to reimburse himself through higher wages. But there is no reason why the employer should be compelled to acquiesce. If that were true, no reduction of wages would ever be possible, because a reduction of wages always implies a lowering of the standard of life. Whether or not a tax on wages will be shifted on profits, even in the long run, depends entirely on the relative strength of the labor organizations or on the other conditions the existence of which may compel an increase of wages by the amount of the tax. Whenever these conditions are not present—and they are frequently absent—the tax will rest on the wage-earner and trench on the margin above the bare rate of subsistence, thus keeping down the standard of life below the point which it would otherwise have attained.

2. Even granting that a tax on wages may in the long run, under favorable conditions, be shifted on profits, it would still be true that in the interval the burden would be borne by the laborer. It is a well known fact that in a general rise of prices, the price of labor is always the last to respond to the general impulse. Wages always lag in the rear of the movement. Now this interval may become more or less permanent. The longer it continues, the more severe will be the suffering that will ensue—and the greater the prospect of the temporary diminution of the consumers' effective demand being converted into a veritable reduction of the laborers' standard of life.

The taxation of labor results in a vicious circle. The weaker the workman, or the lower his general standard of life, the less able will he be to resist the attempts of the employers to reduce his wages to the barest minimum. The higher his wages, the more effective will be his power of resistance and compulsion, and the more likely will be the gradual continual advance of wages. The imposition of a tax on wages thus injures the workman both temporarily and permanently. It reduces his standard of life, and in weakening him it at the same time renders less easy and less probable any future attempt to lift himself out of his impoverished condition. If a tax on wages is shifted on profits at all, it will be only after a long and fierce struggle, during which the laborer may have suffered materially, and as a result of which his whole *morale* may have been lowered. Neither optimism nor absolutism of theory is in place here.

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An import duty is in about the same category. As a general rule, the tax will be shifted in whole or in greater part, but the exact determination will depend on the particular conditions of the individual case.

A tax on monopolies can generally not be shifted, except in the one case alluded to above.

An income tax is a little more complicated. A recent German writer has attempted to prove that an equal tax on income is the only tax that cannot be shifted.[1] And he draws the conclusion that the income tax must therefore be the ideal—the only possible realization of the principle of equality of taxation.

This contention, however, is incorrect, and for two reasons. In the first place, we have seen that there are many taxes which cannot be shifted—like the poll tax, the tax on inheritances, the tax on rent, the tax on salaries, the tax on monopolies. Secondly, and more important, it is untrue that the income tax, as frequently levied, cannot be shifted.

In some countries, as in England, the income tax is simply a combination of taxes on the separate ingredients of income, and it often happens that the so-called income tax is, in reality, a system of taxes on gross revenue or gross receipts, *etc.* In such cases there can be no question that each part of the income tax simply follows the laws of incidence of the respective separate taxes, so that there would be, in respect of incidence, practically no difference between a so-called income tax and the other direct taxes of which the income tax is substantially composed. If the total income is composed of wages, the law of incidence cannot be different, whether we call the share income or wages. If the total income is composed of profits in the broad sense, the tax will be shifted or not, according to the rules of incidence that govern a tax on profits. If the income is

[1] Kaizl, "Die Lehre von der Ueberwälzung der Steuern", 101–118.

derived from house rents, the final burden will be borne in accordance with the principles laid down above. The whole cannot be greater than the sum of its parts. If some of the separate parts are shifted, the whole cannot possibly remain unshifted.

In those cases, indeed, where the tax is levied on pure income in the strict economic sense, the tax is virtually a tax on economic rent, plus a tax on net profits, plus a tax on wages. Now, the tax on economic rent and net profits cannot be shifted, so that for all members of the community, except the wage earners, an income tax levied on pure income would indeed tend to stay where it is put. And in so far as the lowest incomes are exempted from the tax, the tendency would also be for the income tax on the laborers to stay where it is put. But even in such cases there is no absolute certainty that the income tax will not be shifted. And in actual life, of course, we very rarely find either a pure income tax or an equal income tax. As soon as these two conditions are absent, we cannot safely rely on the non-transferability of the tax.

This entire question, however, like that of the incidence of stamp duties and taxes on exchange, as well as the wider problem of the shifting of all taxes from the consumer onward, practically resolves itself into the old problem whether a tax is to be regarded as a cost of production or an outlay for consumption, *i. e.* a mere deduction from revenue.

In all the cases that we have thus far discussed we have traced the shifting of taxes down to the consumer. Certain taxes, we have found, are never shifted; other taxes are sometimes shifted in whole or in part to the consumer. But will not the consumer in turn shift the burden on to some one else?

CHAPTER VIII.

CONCLUSION.

We come finally to the most important part of our our investigation—the question, namely: whether the theory of incidence contains by inference any points of advice to the statesman in framing an actual scheme of taxation. What is the practical result of our discussion? What weight should be attached to the theories of incidence in constructing a positive system of public contributions?

In the first place we have seen that there is no room for optimism of theory. The legislator can not rightfully shut his ears to any cry for reform on the plea that all old taxes tend to become good taxes. Nor dare he complacently snatch any new source of revenue on the assumption that all taxes, no matter how levied, will ultimately be borne by the community at large. The theory that "all taxes fall on everybody" and are therefore just, is incorrect because it assumes that all taxes are a part of the cost of production. This assumption is untrue, because some taxes are levied on persons or property or revenue where there is no further relation of producer and consumer. But even if all taxes were to be regarded as additions to the cost of production, it would not follow that the taxes would be shifted to the consumers in any definite proportion to their faculty, or ability to pay, which is the only test of justice in taxation. If all taxes did really fall on everybody,

taxation would be proportional to expenditure. And expenditure is of all bases of taxation the least equitable.[1]

Thus the optimistic theory must be discarded; first, because the general diffusion doctrine is untrue, and secondly, because if it were true it would result not in justice but in injustice. The legislator cannot shirk his duty in this easy-going way.

On the other hand there is no good reason for pessimism or agnosticism. Some writers, as we know, maintain that it is useless to construct any system of taxation because it is impossible to foresee the ultimate consequences of any tax. But this hopeless attitude we have found to be mistaken. It is true, indeed, that the distinction between direct and indirect taxes is robbed of much of its value. For many of the so-called direct taxes may be shifted in the same way as the so-called indirect taxes. In the common parlance the distinction between direct and indirect taxes is practically relegated to the mind of the legislator. What he proposes should be borne by the original taxpayer is called a direct tax, what he intends to be borne by some one else than the original taxpayer is called indirect. Unfortunately the intention of the legislator is not equivalent to the actual result. We must either revise our nomenclature, or declare the present distinction without much value.

But while it is true that the mere fact of a tax being called a direct tax does not show that it may not be shifted, our preceding discussion has shown that certain general tendencies may be clearly defined. What are these general tendencies of incidence?

[1] *Cf.* above, p. 91.

All taxable objects may be looked at from the standpoint of property or from that of revenue. Regarded from the first point of view, we have found that unequal or partial taxes on revenue-yielding property will tend to be a charge neither on the community nor on the future possessors, but only on the holders at the time the tax was imposed. The Capitalization of Incidence theory comes into play whenever a new tax on certain classes of property is imposed or the rate of an existing tax is altered. The tax is never shifted, but its results are serious, whether for good or for evil, to the class of existing owners alone. The lesson which the capitalization theory has to teach is that the evils of inequality of taxation are doubly intensified when the inequality attaches to revenue-yielding property, and that the ultimate equalization of the burden, if it come at all, can be attained only at the expense of the unfortunate present holders.

If we look at taxable objects from the standpoint of revenue, we have found that there are only two kinds of revenue on which a tax, when once imposed, necessarily remains. These are economic rent and pure profits—or, to use a term which has sometimes been adopted to include both elements, economic surplus. A tax on surplus can never be shifted, because surplus is not a part of cost of production, but the result of the process of production. Thus, taxes on inheritance, gifts, gains from speculation, *etc.*, can never be shifted, because they are a part of surplus, of pure profits. Thus, if it were possible to find a class whose revenue consisted exclusively of economic rent and pure profits, the legislator might single out this class either for taxation or for exemp-

tion, according as it were the general policy to have taxes paid directly or indirectly.

On the other hand, all other taxes would tend, in the abstract, to be shifted, until they fell ultimately on this surplus, because all other taxes would tend to form a part of cost of production. And the conclusion might be drawn either that taxes should be levied only on net profits—or, on the contrary, that the only tax lexied should be an indirect tax on commodities, because it would, in the long run, fall on profits, but without the knowledge of the profit-receiver. According to both of these possible conclusions, taxes on wages or labor would be regarded as part of cost of production, and would be shifted from wages to profits.

Such conclusions rest on doctrines very like those that we discussed under the head of "absolute theories." They would tend to be true only in an isolated community where there was absolute mobility of labor and capital, and where the economic man reigned supreme. In actual life these tendencies would be met with the counter tendencies of "economic friction." Taxes on land would often tend to stay where they were put, because of international relations and lack of absolute transferability of capital; taxes on wages, if cunningly imposed, might lead to a lowering, instead of to a heightening, of the standard of life; taxes on occupiers of houses would not necessarily be shifted to the owners, and so on.

But above all, we must distinguish between kinds of revenue and classes of society. Economic surplus —pure rent and pure profits—may mean the entire revenue of some individuals, but only the partial

revenue of others. In all society there are cross sections which merge into each other. As we have already pointed out, the mere fact that a tax may be shifted by a class does not show that the tax may not press very unequally upon individual members of the class. And if we shift the point of view from social classes to individuals, we see how untenable is the argument that the best tax is an indirect tax, because it will ultimately be shifted to the economic surplus of society. For the tax could get to economic surplus only through the productive consumption of individuals, *i. e.*, through expenditures which would again create a relation of producer and consumer. But as we have just pointed out, not all consumption is productive consumption, and expenditure in general is the least equitable basis of taxation, because it always bears with greater weight upon the less fortunate or more deserving members of any social class.

The words of advice, therefore, which the correct theory of incidence has to offer to the legislator are to choose primarily those taxes whose results can be foretold with some degree of accuracy—to take at all events some taxes where the chances of shifting are very slight indeed, and to take on the other hand taxes which will be shifted in their entirety. In the former class are included taxes on monopolies, net profits, inheritances, and certain forms of property and income. In the latter class are included taxes on commodities in the shape of import duties, certain excise taxes and licenses, and taxes on gross receipts of corporations. If the legislator desires to reach certain classes of society directly, let him choose the first batch of taxes; if he desires to have

his taxes paid unawares, let him choose the second. If neither the one nor the other kind of taxes suffices for the public revenue, the legislator will be compelled, as is often the case, to resort to taxes whose incidence is more uncertain, and where the intentions of the legislator may be entirely frustrated by the actual course of events.

The theory of incidence has therefore an important, but by no means the final, word to say in the elaboration of a tax system. It does not by any means render unnecessary the study of the principles of justice and equality in taxation. If neither the optimistic nor the pessimistic nor agnostic theory of incidence can be any longer upheld, the student of public finance must seek to elaborate the rules of equitable taxation without any reliance upon the automatic operation of presumed absolute laws. He must endeavor to make a choice of public revenues which in themselves and in first instance satisfy the requirement of the principles of economic justice; and in so doing he may be guided by those principles of incidence—but only by those—which are definite and well ascertained. The theory of shifting of taxation hence is an aid to, but not a substitute for, the study of economic justice. As it has been said, the doctrine of incidence is neither the archangel nor the archfiend of the science of finance.

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Sinking Funds.

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SINKING FUNDS.

BY

EDWARD A. ROSS, PH. D.,

Associate Professor of Political Economy and Finance in Cornell University.

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TABLE OF CONTENTS.

		PAGE.
	INTRODUCTION	7
I.	ENGLISH AMORTIZATION	9
	The Walpole-Stanhope Sinking Fund	9
	The Theories of Dr. Price	12
	Pitt's Sinking Fund	14
	Decay of the Old System	16
	"The Old Sinking Fund."	18
	"The New Sinking Fund."	19
	Terminable Annuities	20
II.	AMERICAN AMORTIZATION	21
	Redemption of Paper Money	21
	Loans	24
	Plan of Robert Morris	25
	Efforts to Provide for the Debt	26
	Foreign Loans	29
	Summary	30
	The New Government	30
	The Report on the Public Credit	31
	The Funding Act	34
	The Sinking Fund of 1790	36
	Early Operations on the Debt	37
	Changes Made by the Law of 1792	41
	Complications	44
	The Sinking Fund of 1795	48
	The Sinking Fund of 1802	63
	The Sinking Fund during the War	68
	Reorganization	70
	The Sinking Fund of 1817	73
	Debt Payment between 1837 and 1862	76
	The Sinking Fund of 1862	79
	Liberal Interpretation	82
	Conclusions	84
III.	THE THEORY OF AMORTIZATION	86
	Our Theory Concerned with Settled Policy	86
	The Meaning of the Term "Sinking Fund."	87

PAGE
Contingent Amortization.............................. 89
Uniform Amortization................................ 91
Effect of Amortization in a Borrowing Period......... 92
When Suspension is not Necessary....... 93
Forms of Uniform Amortization....................... 94
Progressive Amortization.... 96
Proportional Amortization.......... 101
Variations from the Type............................ 102
Tendency to Uniform Treatment of a Public Debt..... 103
Suspension of Amortization.......................... 103
What is the Best Mode of Amortization?............. 104

INTRODUCTION.

To understand the nature and workings of the device known as the sinking fund, we must study it as it appears in the financial history of England and of the United States. In the former we have exemplified all the financial mistakes to which a wrong theory of amortization can give rise; in the latter we discover the slow emergence of certain ultimate forms of amortization, on which both experience and scientific analysis set the seal of approval. Both taken together furnish ample basis for a theoretical treatment of the payment of public debts. The study then falls under the three heads: English Amortization, American Amortization, The Theory of Amortization.

SINKING FUNDS.

I.

English Amortization.

The Walpole-Stanhope Sinking Fund.

The permanent funded English debt began in 1694, when twelve million pounds were borrowed from the Bank of England in consideration of its charter. During the Dutch wars the debt rapidly grew until, in 1716, it amounted to forty millions. The various loans making up the debt were based on the pledging or mortgaging of specific taxes, or revenues. Loans thus guaranteed were said to be "funded." The interest of each loan was provided for by a particular tax pledged for a term of years, while the principal was to be discharged, either by the regular excess payment of an annuity, or by the varying surplus yielded by the tax. By this "funding" policy the public debt came to consist of many small loans, each bottomed on its own petty item of revenue. This complicated and rigid system, wherein the growth of one source of income could not be used to eke out the shrinkage of another, proved unfit for a growing public finance. In 1716, the many little items of revenue, mortgaged to some particular debt, were grouped together into four large funds, the Aggregate, South Sea, General, and Sinking funds.

The first three were composed of permanent taxes, and secured the interest on three great blocks of public debt. The fourth was made up of the surpluses of the first three left over after satisfying all charges upon them, and was called the "Sinking Fund," because it was appropriated to the sinking of the national debt, "and to no other purpose." As it was to be invariably applied to interest-bearing debt, the fund was sure to show a steady growth. For as its yearly income operated in extinguishing the debt, the interest thereby disengaged went, of course, to swell the surpluses that made up the sinking fund; so that this fund grew in geometrical ratio, just as if it had enjoyed the right, granted to later sinking funds, of receiving interest on all debt redeemed by it.

For a while this permanent appropriation, known as the Walpole Stanhope sinking fund, was a national pet, and ministers met deficits by new loans rather than check the growth of the infant. Even during borrowing periods the fund served the purpose of lulling the people into the belief that the national debt was being swiftly and surely extinguished. In 1727 the interest on the public debt was reduced from five per cent. to four, thus adding four hundred thousand pounds to the three surpluses that together constituted the sinking fund. But from this time on gradual encroachments were made by charging with the interest of new loans the fund that had been solemnly set aside for paying the principal of the public debt. In 1733, Walpole needing half a million for current expenses, broke into the fund this time, taking not merely the interest of the sum he wanted, but the sum itself. The next year the whole yield

of the fund was diverted from its purpose, and the two following years it was anticipated and mortgaged. In 1737 and 1738 the national debt was reduced three millions by the income of the fund. During the following twelve years it was seized for the use of the government. In 1749 another refunding of the debt at lower interest added six hundred thousand annually to the fund, but not more than three millions of debt were extinguished by it in six years of peace.

In 1752 the sinking fund underwent a change. The war of 1740-'48 had called for loans to the extent of thirty-two millions, and for the funding of these a great variety of new taxes had been imposed. These new taxes, now, together with the new debt, were carried into the sinking fund. That permanent appropriation, which formerly had been made up of specified surpluses and applied to the principal of the debt, was now enlarged by taxes and charged with the interest of new loans. In a word, its original character of *sinking* fund was utterly obscured. Thus inflated, the income of the fund averaged two and one-half millions a year till the outbreak of the Revolutionary war. The total decrease in the British debt for twelve years was, however, but a trifle over this sum. During the war England borrowed heavily, so that at the accession of Pitt in 1784, the debt reached the figure of two hundred and forty-five millions. One of Pitt's first reforms was to lump together the revenues distributed among the four permanent funds into a "consolidated fund," and to hypothecate this fund to the public creditors. This was the origin of British "consols." He next addressed himself to maturing a plan for extinguishing a debt which was then exciting general alarm.

The Theories of Dr. Price.

In 1772, Dr. Price, an eminent clergyman, and a closet financier, published an "Appeal to the Public on the Subject of the National Debt," which was widely read by an anxious public. In this book Dr. Price advanced much ingenious calculation and reasoning to show the magical effect of a *permanent sinking fund.* By this he meant that a certain sum should be annually set aside for the extinguishment of the national debt. This sum should be used in buying public stock in the market at the current prices, and the interest accruing on the stock thus bought should be invariably used in still further increasing the purchases. In this manner a fund would be formed, which would grow by compound interest and, if maintained inviolate, would, in time, absorb a debt of any size, at but little expense to the nation. However small the original annual appropriations might be, they would be in this plan invested at compound interest, and would need only time to cancel any debt.

The efficacy of the scheme, Price insisted, lay in keeping up the annual payments in war as well as in peace, in times of deficit as well as in times of surplus. According to him it is perfectly proper to borrow money to maintain the appropriations, inasmuch as the sums borrowed are obtained at simple interest and invested in government stocks at compound interest. With a high rate of interest the fund increases only the more swiftly, and hence it is sound policy to create new debt at a high rate of interest, in order to buy in old debt at a low rate. Indeed, a debt at a high rate of interest, with a sinking fund attachment will be discharged more

quickly than the same debt with the same sinking fund, at a lower rate. "A state may without difficuly redeem all its debts by borrowing money at an equal or even higher interest than the debts bear; and without providing any other funds than such small ones, as shall from year to year become necessary to pay the interest of the sums borrowed." The magical efficacy of the compound interest principle is illustrated by the fact that a penny, put at five per cent. compound interest in the year 1, would in 1775 amount to three hundred millions of earths, all solid gold. But at simple interest the penny would amount to seven shillings and six pence! Hence the importance of never interrupting the operations of the sinking fund. "All governments that alienate funds destined for reimbursement choose to improve money in the *last* rather than the first of these ways."

It is not necessary to open up the theory of amortization here, in order to expose fallacies that time has already exploded. Let it suffice to say that the chief and central misconception of Dr. Price was in regarding government stocks as productive property. It was this that led him to look upon the interest on stocks bought in for the sinking tund as "earnings," and not as the proceeds of taxation. It was this that prevented him from seeing that the magical reduction effected by a small annual appropriation is due to the fact, that for many years the nation enjoys no easement from its operations on its debt, but continues to pay fictitious interest upon portions of its debt bought up and thus already practically redeemed. After all, the national debt is extinguished by taxa-

tion. But in Price's scheme taxes are paid over not as reimbursement, but as interest on defunct stock.

Pitt's Sinking Fund.

The theories of Price, though clearly refuted by a few obscure writers, were widely accepted, and when Pitt resolved upon the reduction of the national debt, he adopted them as the basis of his system. In 1786, at a time when the recent doubling of the national debt caused general alarm, Pitt found himself with a clear surplus of nine hundred thousand pounds. This surplus raised by additional taxes to a million, he proposed to constitute a permanent sinking fund appropriation. Following the advice of Dr. Price, he determined to put his fund beyond the clutch of needy finance ministers by turning it over to a special branch of administration. The yearly appropriation was to be vested in a "Board of Commissioners of the Sinking Fund," and by them applied quarterly to the purchase of public stocks, at or below par. The treasury was to pay interest on this stock just as it would on any other outstanding stock, and this interest, together with all temporary annuities that should fall in, was to be applied quarterly, in the same manner as the original appropriations. These quarterly purchases prevented the accumulation, in the hands of the commissioners, of a sum large enough to tempt the cupidity of a finance minister, while their regularity made it impossible so to cook the accounts of the board, as to conceal any invasion of the fund.

The yearly payment was to be one million pounds. When this should be increased by lapsed annuities and by the annual interest on stock constituting the sinking fund to four millions, it was to be at the dis-

posal of Parliament. Until then the payment on behalf of the sinking fund took precedence of everything except the interest on the public debt, and could not be withheld except by an act of repeal, passed in full view of the public. When Fox objected to a plan that would tie up so much of the national income, even in time of war, he was told that the essence of the scheme was to keep the sinking fund sacred, and that any diversion of the fund would prove its ruin. He succeeded, however, in getting a clause inserted, authorizing the commissioners of the sinking fund to accept as much of any new loan as they should have the money to pay for. Strange to say, this clause, which permitted the government to borrow back its payments to the sinking fund, and which made useless all the safeguards thrown about the fund to secure its inviolability, was heartily commended by Pitt. Still stranger is it, that this wise clause was never acted upon in raising any of the great war loans, but was first followed in 1819, in a time of peace.[1]

After brief debate this plan passed Parliament with no dissenting voice, and received the royal approval amid general congratulation and enthusiasm. "Never was the admiration of any public measure more warm and general, and never was there fuller confidence in the soundness of the principles upon which it was founded."[2] Huskisson declared Pitt's sinking fund "perhaps the proudest monument raised by the virtues and the genius of Mr. Pitt, to his own fair name, and one that should be preserved unmutilated and entire, in all the strength and symmetry of

[1] Tomline's "Life of Pitt," pp. 164–167.

[2] Tomline, p. 164.

proportion assigned to it by the hands of its immortal author." Tomline thinks that Pitt's inviolable sinking fund "probably saved this country from becoming a province of France."

In 1792, Pitt's system was supplemented by an act establishing an accumulating sinking fund of one per cent. on the nominal capital of all loans. By this means every debt was at its creation to be "put in course of liquidation." This principle was abandoned for new loans in 1798 and the following years, and eighty-six millions of debt were created without a one per cent. sinking fund. In 1802, however, this principle was again revived and adhered to for a number of years.

At first Pitt's sinking fund was an honest one and rested on a clear surplus. But in 1793 the war with France began, and for a very long period England's balance sheet showed no surplus, but only huge deficits. In this new situation amortization would have been suspended, if sound doctrine had been abroad. But under the influence of Dr. Price's theories, Parliament continued for many years enlarging and strengthening the sinking fund, till in 1813 sixteen million pounds were used in reducing old debt. About this time most of the stock bought up and held by the commissioners of the sinking fund was cancelled, thus reducing the annual fund by about six millions of interest.

Decay of the Old System.

In 1813, Professor Hamilton, of Aberdeen, published a book on the British debt, which marked an epoch in the growth of financial theory. In this he reviewed, one by one, the reasonings of Dr. Price,

and laid the finger of criticism on the weak spot in each. He pronounced all schemes for wiping out the public debt by sinking funds operating by compound interest, illusory. The excess of revenue above expenditure, he maintained, is the only real sinking fund by which public debt can be discharged. Amortization during borrowing periods is a purely fictitious operation which in no wise reduces debt, but really adds to it.

With the publication of these ideas the old notions, which led a minister to declare that the sinking fund was "an advantage gained by nothing," began to disappear. Great inroads began to be made in the old system. The Parliament of 1819 thought it necessary that there should be a yearly *surplus* of income of five millions for the purpose of the sinking fund. In 1823 the sinking fund was cut down to five millions, though the practice of keeping the stock redeemed, in the hands of commissioners, was still retained. In 1828 the old system lost whatever shred of credit it still possessed by the appearance of Lord Grenville's "Essay on the Supposed Advantages of a Sinking Fund." In this essay one of the former ardent champions of Pitt's policy renounced his former belief in it, and recanted his error in a formidable exposure of the old fallacies.

In the same year a parliamentary committee estimated that as a net result of the sinking fund system kept up during war, the nation had, between 1785 and 1829, borrowed £330,000,000 at about 5 per cent. interest, in order to pay a debt of the same magnitude at 4½ per cent. interest. This policy, by which a debt at 4½ per cent. was converted into one at 5 per cent., meant an annual loss in interest of £1,627,765

extending over forty-three years. This was the conclusion arrived at without taking into account the cost of administering the sinking fund, or the depreciation of the public stock caused by the custom of borrowing sums much larger than were required for national expenses.

In consequence of these results the finance committee denounced a sinking fund fed by loans, and laid down the axiom that funds for the extinction of debt should not be raised by the creation of it in another shape. It held that the only fund that can advantageously be used for sinking is the *net surplus* of receipts over expenditures. Hence, instead of fixing in advance the sum to be applied to the principal of the public debt, it was better to appropriate only the net annual surplus, whatever it might be. In view of the size of the debt at that time, it was thought desirable that there should be provided a yearly surplus of three millions. But in case this excess should not be realized, it would not therefore be wise to resort to borrowing in behalf of amortization. Whatever stock was redeemed was to be promptly cancelled and interest was to be no longer reckoned on defunct paper.

"The Old Sinking Fund."

The next year the recommendations of the committee were practically followed. It was enacted that the formal sinking fund be abolished; that in place of it any surplus, as it was realized, should be applied quarterly to the redemption of the debt; and that money should on no account be borrowed for the fund. The stocks then standing to the credit of the sinking fund were to be destroyed, and interest

on them was to cease. The new fund was to redeem annuities, exchequer bills, or other non-interest-bearing debt, as well as consols. For these purposes the Chancellor of the Exchequer was to secure, if possible, a surplus of three millions a year.

The extremely simple plan of amortization adopted at this time remained for many years the only provision for the payment of the British debt. It was not found, however, to favor any energetic and effective reduction. The intended surplus of three millions was never realized after 1829. A succession of languid and popularity-seeking ministers preferred the remission of taxes, or an expensive foreign policy, to the payment of the debt. In 1857 a regular sinking fund was established, but as it soon necessitated the old practice of borrowing in order to pay debt, it was abandoned.

"The New Sinking Fund."

In 1875, impressed with the duty of energetically reducing her debt, England sought to make more effective provision for amortization. As the old extra-budgetary provision had failed, it was thought necessary to bring the principal of the debt again within the field of regular appropriation. Instead of being put off with the "leavings," the sinking fund was to come within the accounts as an ordinary expenditure, the surplus or deficiency of the year being reckoned, only after it had been included.

Instead of reverting to the old method of paying interest to the sinking fund on all debt redeemed, the simple American plan of a *combined fund* was introduced. A fixed sum larger than the interest charge of the debt was permanently appropriated. The

excess was for payment of the debt. As each year the interest charge shrunk, the surplus for amortization was correspondingly enlarged. This provision, known as "The New Sinking Fund," is still in force. The former appropriation of the annual surplus remains under the title of "The Old Sinking Fund." In In addition to these there are five small especial sinking funds[1] concerned with outlying portions of the British debt.

Terminable Annuities.

Besides these devices England has been reducing her debt by the use of terminable annuities. Formerly these were sold to raise money or given to lenders as a bounty. Later it was discovered, that by converting blocks of the public debt into this form of obligation, a system of regular debt reduction could be maintained, when otherwise impracticable. By this process a portion of stock is cancelled, and in place of it an annuity which includes both interest and reimbursement, is issued to run for a term of years. Once the conversion is accomplished, the amortization becomes perfectly automatic, and must be maintained in deficit years as well as in surplus years. Under this system later English chancellors have been able to make large reductions in the public debt.

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[1] Buxton's "Finance and Politics," Vol. II, p. 217, note.

II.

American Amortization.

Redemption of Paper Money.

The problems of debt payment first met our government early in the Revolution. At the outset of the war the Second Continental Congress, afraid to tax and unable to borrow, resorted to a favorite colonial expedient and paid the expenses of the war by issuing bills of credit resting on the faith of the confederate colonies. These promises to pay were to be redeemed by the several colonies, the whole being apportioned among them in proportion to population. Each colony was to secure its quota of bills as it saw fit, and pay them into the general treasury in four equal annual instalments, beginning in 1779. If any colony could not secure its quota of continental bills by taking them for taxes, or by exchanging its own notes for them, it might make up the amount in specie. Such specie as should thus be paid in was to be retained by the continental treasurer to redeem such outstanding bills as should be presented directly to him. With these provisions for redemption Congress, in July, 1775, ventured to issue three millions of paper money.

Before the end of the year four more millions were issued, and each colony was directed[1] to provide ways and means of sinking its proportion of bills in the

[1] December 26, 1775.

most effective manner. The redeemed bills were to be cancelled and paid in, in four instalments, beginning in 1783, when the former instalments ceased. The large emissions of 1776 so depreciated the paper money, that in 1777[1] we find Congress again anxiously urging the colonies to do something to redeem their quotas.

Later on it was seen that a great war debt like the continental currency could not be paid by ordinary taxes, and there was talk of recurring to the nearly obsolete English practice of charging the debt on special taxes, or on specific sources of permanent income. In reference to the several issues of bills, a report of the board of treasury on January 2, 1779, declared it "necessary to ascertain the period of their redemption and seasonably to establish funds, which in due time shall make adequate provision for the same."

Thereupon Congress resolved that the states be called upon to pay in their respective quotas, of fifteen millions for 1779, and six millions annually for eighteen years thereafter, as a fund for sinking the emissions and loans. The quotas were to be paid not in state notes, but in continental bills, and these were to be applied to paying the interest and principal of the interest-bearing loans. The residue was to be burned. The circular letter embodying the above was followed in May by another raising the amount of bills called for to sixty millions.

On March 18, 1780, Congress, after having solemnly and repeatedly pledged the public faith to the full redemption of the continental paper, bowed to the inevitable and recognized the depreciation of its own

[1] January 14.

bills. It undertook itself to redeem the old issues by a new emission to be exchanged for the old at the rate of one for forty. These bills were to be issued on the credit of individual states, each state being assigned its due quota, and were to be redeemed by special state funds sufficient to retire a sixth part of the bills annually. The new bills bore five per cent. interest, were to be redeemed in specie, and the faith of the United States was pledged for their redemption in case any state failed to sink its share.

With the growth and collapse of the paper bubble there began slowly to emerge the conviction that the state must wield the taxing power with a strong hand, and must cut deep into the resources of the community, if public credit were not utterly to disappear. The resolutions of a convention held at Philadelphia in August, 1780, with a view to forming a closer union, show the growth of better financial ideas. Resolution six urged that the credit of the continental bills be sustained by all the states sinking their quotas by taxation, or by other means. Resolution seven recommended that each state immediately establish funds for sinking annually at least one-sixth of the bills they shall emit, the tax for raising such funds to be paid the first year in specie, the remaining five years in specie or in the bills to be redeemed. The object was "that the credit of the paper may rest upon the funds provided for their redemption, as every attempt to support their credit by forcing them into circulation tends to defeat the purpose and to depreciate them." Thus the dream of sustaining unfunded paper was dissolved. It was recognized that public faith rests not on vague and

general promises, but on the setting apart of actual and adequate revenues.

Despite all wise resolves, the new issues of paper money soon sank to the level of the old, and in 1781 the whole irredeemable mass vanished from circulation and collected in the hands of speculators. Here the unpaid bills were no longer a dangerous and disturbing element, and here Congress left them till a more convenient season for liquidating.

Loans.

But no sooner had the currency problem in a way solved itself than Congress began to be embarrassed by pressure from another quarter. During the contest loans had been filled and interest-bearing certificates issued, based on the promise of France to pay in specie the interest on whatever sums could be raised at home. At the close of hostilities, however, France was compelled, in justice to herself, to interrupt her subsidies and loans, while, owing to the disastrous career of paper money here, private capitalists were unwilling to lend without the guarantee of established funds. In 1781,[1] therefore, Congress, after having in the previous year summarily redeemed the continental currency, cast about for means to meet the burden of domestic debt soon to be rolled upon its shoulders by the drying up of foreign aid and the difficulty of negotiating European loans. On February 3, it resolved that it be recommended to the several states as indispensably necessary that they vest a power in Congress to levy for the use of the United States an *ad valorem* import duty of five per cent; that the moneys arising from the duty be

[1] February 3.

appropriated to the discharge of the principal and interest of the debts already contracted, or to be contracted, for the war; and that the duty be continued till these debts be fully and finally discharged.

Plan of Robert Morris.

While Congress was thus vainly urging upon jealous and suspicious states the necessity of national revenues, Robert Morris, in his letter[1] of July, 1782, to that body outlined a complete scheme of constructive finance. After reviewing the industrial advantages, to a new country, of borrowing over ruthless taxation, and of foreign loans over domestic loans, he dwelt upon the utter loss of the once stable public credit. The causes were: the repudiation of the old continental bills, the reluctance of the states to tax, the feeble financial powers of the government, and the absence of any provision for the public debt. The first step in the restoration of credit is, said Morris, the retirement of all outstanding continental bills. The second is the funding of the public debt, that is, the pledging of specific revenues to the service of particular loans. The scheme of paying domestic interest by the proceeds of foreign loans is ruinous and should be abandoned. The interest of the public debt must be provided for by distinct funds. These must be ample, because a deficit would be disastrous, while an excess would serve to pay immediately a part of the debt, and thus strengthen credit. Morris thereupon proposes a five per cent. tariff, a one dollar poll tax, a land tax of one dollar per hundred acres, and an excise of one-eighth of a dollar per gallon on distilled liquors. On each of

[1] "Diplomatic Correspondence", Vol XII, p. 211.

these, estimated at half a million, a loan could be opened payable in specie or in debt evidences of a particular description. It is further proposed that the casual surplus of each of these taxes should be carried to a sinking fund, on the credit of which new loans might be opened if necessary. The public land Morris regarded as a future source of revenue, but as yet not available for the existing debt.

Efforts to Provide for the Debt.

Six months later Congress, in order to induce the niggardly and distrustful states to grant the power to tax, passed an important resolution reported by a committee headed by Hamilton. It was resolved "that whenever the net produce of any funds recommended by Congress and granted by the states, for funding the debt already contracted or for procuring future loans for the support of the war shall exceed the sum requisite for paying the interest of the whole amount of the national debt, which these states may owe at the termination of the present war, the surplus of such grants shall form a sinking fund, to be inviolably appropriated to the payment of the principal of the said debt, and shall on no account be diverted to any other purpose." A little later, in response to the complaint and petitions of the public creditors to whom no interest had been paid since March 1, 1782, it was resolved that the establishment of permanent and adequate funds on taxes or duties was necessary for doing justice to the public creditors, for restoring public credit, and for providing for the war.

The same session Congress passed an act making the most ample provision in its power for the public debt. The government was to be invested with the

right to levy for twenty-five years certain import duties, estimated to yield about a million annually, the proceeds to be applied solely to the debt of the United States. As the proposed tariff still left $1,500,000 of yearly interest unprovided for, Congress recommended that this charge be quoted among the states and raised by special taxes or revenues established for twenty-five years. Accompanying the act was an address to the states, setting forth that on January 1, 1783, the foreign debt was $7,885,085, the domestic debt, $34,115,290, and the total, $42,-000,375 ; the annual interest was $2,415,956, of which $915,956 was to be raised by national taxation, the rest by income from the states, and from the sales of public lands.

This promising plan, like its predecessor, was foiled by the stubborn particularism of Rhode Island. But there was yet another resource. Urged by Congress, the individual states, after the war, ceded their western lands, thus endowing the poverty-stricken national government with a vast territorial domain. As petty local jealousy and state narrowness thwarted every effort to establish national revenues, Congress turned to the sale of public lands as a final resource. The ordinance of 1784-5 proposed that all moneys, arising from the sale of land warrants, should be applied to the sinking of the public debt, and to no other purpose whatsoever. Although this paragraph was omitted at the final stage of the ordinance, the object of it was secured. In a report of February 2, 1786, it is admitted that the United States are in possession of "another fund," arising from the cession of vacant and unappropriated land by individual states. But this, as public securities are received in

payment, will bring but little specie into the treasury. Being depreciated considerably below and receivable at par with specie, it is to be presumed the purchasers will procure these securities for the purpose. These lands may be calculated on, therefore, as a fund only for the discharge of the domestic debt. Thus by land sales, and by taxes of which a large share was permitted to be paid in securities, the debt was slowly being absorbed.

On the other hand, it was rapidly growing owing to the conversion of unpaid interest into principal. From 1782 to 1786 the accummulation of back interest was over six millions![1] The only acknowledgment of this obligation was the issue of certificates of interest, or "indents." These circulated freely as a kind of depreciated currency, and operated the same as the continental bills. When the debt was funded, in 1791, the mass of these indents was over thirteen millions. Only by squeezing the certificates it had just given, from the pocket of the tax-payer again, could Congress check the growth of the debt. Of regular payment or redemption, there was none, for specie was not forth-coming in sufficient quantities, Congress' only resource was repeated requisition, which yielded very little specie. Thus, in 1781, a requisition of $8,000,000 yielded only $1,486,154. From November 1, 1781, till February 1, 1786, the states were assessed over fifteen millions. Of this they paid only $2,450,803. From November, 1784, till April, 1788, only $996,448 was received from the states.

[1] Elliot.

Foreign Loans.

The history of foreign loans under the Confederation is interesting and characteristic. By a settlement of Franklin with the French court in July, 1782, it appeared that the loans to the United States amounted to eighteen million livres. On this sum the king relinquished not only all interest till date, but all interest till peace should be concluded. The principal, with 5 per cent. interest, was payable in twelve equal annual instalments, beginning three years after a peace with Great Britain should be signed. Besides this there was a loan of ten million livres made by Holland on the security of the French king. This debt at 4 per cent. was reimbursable in ten equal annual instalments, beginning November 5, 1787. The next year[1] a further loan of six million livres was granted, payable between 1797 and 1803. These sums, together with four millions due French citizens, reached the round figure of thirty-eight millions of livres, or about seven million dollars.

Between 1782 and 1788 the Government succeeded in negotiating four loans in Holland, one for five million florins, one for two millions, and two loans for a million each. The payment of the interest on the foreign loans was regular, but the interest came directly from the proceeds of the loans themselves. The two one-million loans were expressly obtained and pledged to the payment of interest on the preceding ones. Each of the four Holland loans was payable in four instalments, beginning eleven years after date. The first payment was due in 1793. Although frequent recourse to the loan market

[1]1783.

enabled the Confederation to maintain its credit in Holland, it repeatedly broke its engagements with France. Not only was the interest defaulted for several years, but the instalments of $462,000 falling due in 1787, 1788 and 1789 remained unpaid despite the urgent need of the French treasury. At the close of 1789 the arrearages of interest and the unpaid instalments of the foreign debt amounted to over three millions.

Summary.

The effect of the bad financiering of the Confederation on the debt is thus summarized by Gallatin:

"From the 1st of January, 1784, to the 1st of January, 1790, the principal of the domestic debt was reduced by the sales of land, which amounted to about $1,100,000; but in the meanwhile, the interest accrued was near ten millions of dollars, of which about six millions remained unpaid.

"During the same period the greatest part of the interest on the foreign debt accumulated to an amount of about $1,700,000; and a new debt was contracted in Holland of $3,600,000. The whole debt, foreign and domestic, increased therefore, during those six years by a sum exceeding ten millions of dollars."[1]

The New Government.

At the final stage of the old regime the country wore the appearance of bankruptcy. Credit was kept alive only by the hope that the new government would unseal sources of revenue inaccessible under the defective Confederation. "The Dutch," writes

[1] Writings, Vol. III, p. 124.

Jefferson, in May, 1788, "consider us the most certain nation on earth for the principal. The whole body of money dealers . . . . look forward to the new government with a great deal of partiality and interest." At home the public securities that had commanded only fifteen cents on the dollar, rose from January to November, 1789, thirty-three and-a-third per cent., and from November to the end of the year fifty per cent. more. The publication of Hamilton's report carried the price to fifty cents on the dollar.

Of the attributes of the new government the one, perhaps, most coveted by patriots and statesmen was the power "to lay and collect taxes, duties, imposts, and excises." Accordingly upon the establishment of the Treasury Department in 1789, Congress directed Hamilton, the first Secretary of the Treasury, to report a plan for the support of the public credit. The plan presented by him in his "Report on the Public Credit," of January 14, 1790, was as follows:—

The Report on the Public Credit.

The state is scrupulously to perform the contracts with its creditors. As these involved the right of full transfer, the state should make no discrimination prejudicial to the present holders of the public debt. Since the state can justly make no discrimination between different classes of creditors, it should assume the debts contracted by the individual states for the common defence. Arrears of interest are entitled to equal provision with debt principal. The foreign debt, with interest arrears, amounted to \$11,221,564; the domestic debt to \$42,414,085. The total annual interest at existing rates on the whole

debt, including twenty-five millions of state debts to be assumed, would be $4,587,444. As provision for this sum would strain the resources of the state, Hamilton hopes the creditors may be induced by offer of fair terms to modify their claims. This is but just owing to the prospect of a fall in the rate of interest to five per cent. in five years, and to four per cent. in twenty. It is proposed, therefore, to raise a loan payable in debt and ample to absorb all outstanding domestic obligations. For every one hundred dollars of evidences of debt subscribed to this loan the subscriber should be entitled either to have two-thirds in funded six per cent. stock, and the remainder in land at twenty cents per acre; to receive the whole in four per cent. stock and $13.80 in land; to receive two-thirds in six per cent., stock redeemable at the rate of not more than one per cent. yearly, and $26.88 of similar stock in ten years; or to receive a life annuity. In addition to this loan of conversion there should be a loan of ten millions payable half in debt and half in specie.

To meet the annual charges, tonnage fees and import duties are proposed. The proceeds should be devoted in the following order; to the foreign debt, the civil list, the interest of the new loan, and the payment of the unsubscribed old debt. The income from the postoffice, estimated at $100,000, is to be reserved as a sinking fund. The secretary, though regarding the funding of the national debt as a national blessing, is yet so far from believing that public debts are public benefits, that he wishes to see it incorporated in our system as a fundamental maxim, that the creation of debt shall always be accompanied by the means of extinguishment. This

is the true secret of rendering public credit immortal. It is, therefore, advised that the net product of the postoffice to a sum not exceeding one million dollars be vested in a Board of Commissioners, to consist of the Vice-President, Speaker, Chief Justice, Secretary of the Treasury, and Attorney General, for the time being. The sum shall be held in trust and applied by them to the discharge of the existing public debt, either by purchases of stock in the market, or by payments on account of the principal, as shall appear to them most advisable in conformity to public engagements. It is furthermore suggested that the commissioners be authorized to borrow on their credit a sum not exceeding twelve million dollars to be applied:

First—To pay the sums due on the foreign debt.

Secondly—To supply any deficiency of funds for the interest on the domestic debt.

Thirdly—To refunding the foreign debt at five per cent.

Fourthly—To purchasing the domestic stock on the market when below par.

The financial system of Hamilton was in its main features incorporated into the funding act of August 4, 1790, carried through in the face of much opposition and objection. The central idea of this act is the funding of the debt. Previously the debt was provided for by annual grants. Under this system the claims of the creditor were set every year at the hazard of the passion, partisanship, or intrigue of any one of the three branches of the legislative department. Public faith could be broken by the non-concurrence of one branch. But under our funding sys-

tem the public creditor acquired a proprietary right over the constituted funds. The revenues of the state were, in part, mortgaged for his benefit. His debt was supposed to be secured not by a mere promise, but by a material pledge. However that may be, it is certain that, once provided for, the creditor was safeguarded against breach of the public faith, not only by the self-preserving inertia of any measure of settled policy, such as a permanent appropriation, but also by the requirement that three branches,—House, Senate, President,—should concur in its repeal.

The Funding Act.

The funding act reserves from the current revenues six hundred thousand dollars, or such sum as may from time to time be appropriated for current expenses. As much of the residue as may be needed is appropriated to the payment of interest on foreign loans existing, or on further loans that may be made for paying off the existing foreign loans,—to continue until these loans shall be satisfied. With this is coupled authority for the President to raise a loan not exceeding twelve millions to be applied, in the first instance, to paying the arrears, instalments, or principal of the foreign debt. Like most of the Holland loans, this must be reimbursable within fifteen years.

For the interest on the domestic loans proposed, Congress made inviolable and permanent appropriation of all moneys arising under the existing revenue laws, excepting the part above reserved. That these might never be diverted to any other purpose, the account of their receipt and disbursement was to be kept distinct from the product of any other taxes,

except such as should be levied for a like purpose. The faith of the state was furthermore pledged to provide sufficient and permanent additional funds for the full payment of interest on all new stock.

In return for this new and special security, the creditor, it was hoped, would voluntarily consent to a reduction of his income. To meet the interest at the existing rate of 6 per cent. the government would require a revenue of $5,000,000. This was deemed too severe a strain to put upon untried fiscal machinery. Accordingly, the funding act contemplated providing for the domestic debt on a four per cent. basis. This reduction was to be effected by a new loan, the subscriptions thereto being made payable in evidences of public debt. The old six per cent. certificates were to be exchanged for new funded stocks, or bonds. For every sum subscribed in principal of debt, two bonds were to be issued, one for an amount equal to two-thirds of the subscription, to bear six per cent.; the other for one-third of the subscription, to bear six per cent. after 1800. These two kinds of debt were known as "six per cent. stock" and "deferred stock." As they were liable to redemption at the rate of not more than two per cent. per annum, they could be converted at will into an eight per cent. annuity terminable in about twenty-two years.

After the principal of the domestic debt was provided for, there remained about thirteen millions of "indents," covering interest accruing up to 1791. These were made receivable only for a special kind of stock, redeemable at will, and bearing three per cent. interest. The federal debt once disposed of, the funding act provided for the assumption of $21,500,000 of state debts incurred in the common cause.

This was to be done by exchanging that quantity of the new stocks, in certain proportions, for an equal amount of the certificates, or indents, issued by individual states. The final provision is that the proceeds of all sales of public lands be appropriated to the sinking of the public debt.

In effect, then, the funding act authorized a foreign loan, created three kinds of domestic stock — the six per cents., deferred 6s, and three per cents., provided for the conversion into this new stock of the old Revolutionary debt, the accrued interest, and the state debts, and finally made permanent appropriations both for the interest and for the principal of the new stock.

To the public creditors the conversion of the debt into a funded loan was not a decree but a proposal. He who refused to subscribe did not forfeit his claim. His rights were unimpaired, but during 1791 he must content himself with the reduced rate of interest of the subscriber to the new loan, and yet remain exposed to the insecurity of a precarious annual grant and optional redemption. Under such circumstances it is not strange that the body of public creditors subscribed to the new loan, and the funding was a success.

The Sinking Fund of 1790.

On August 12, 1790, was approved the act establishing the first federal sinking fund. This provided that the surplus revenues of 1790 from imports and tonnage should be applied to purchases of the public debt at its market price, if not above par. The purchases were to be made under the direction of the Vice-President, Chief Justice, Secretary of State,

Secretary of the Treasury, and Attorney General, any three of whom were authorized, with the approbation of the President, to make such purchases as they should deem best, provided these be made openly and with due regard to the benefit of the several states.

The accounts of the application of the fund, accompanied by returns of the amount of debt purchased, were to be rendered at the end of each quarter; and a full and exact report of the proceedings of the commissioners was to be laid before Congress within the first fourteen days of each session. The report should include a statement of the disbursements and purchases, specifying the time when, prices at which, and persons of whom purchases were made.

To strengthen the fund the President was authorized to borrow up to $2,000,000, at a rate not exceeding five per cent., to be applied to purchases of the debt under the same regulations as the surplus of 1790. But, if this was done, there must be reserved annually out of the interest on the debt bought by the commissioners a sum, not exceeding eight per cent. of the sum borrowed, to go toward paying the interest and sinking the principal of the same.

Early Operations on the Debt.

We have now reviewed legislative provision for the debt. It remains to examine operations under the law.

The refusal of the government to assume the burden of the domestic debt till January 1, 1791, twenty months after the inauguration of Washington and fifteen months after the first real revenue began to come in, enabled it to apply the taxing power grad-

ually, and to test each part of the revenue machinery, before putting it to the strain of providing for a debt of nearly eighty millions. The interest for 1790 on the home debt was converted into principal. The demands of the foreign debt were met by a new Holland loan.[1] This left a large part of the revenues of 1790 free to fall as surplus into the sinking fund, and be applied to the purchase of certificates. This surplus was found to be $1,374,656. Under a proviso of the redemption act, a part of this was reserved to meet the heavy interest charges for 1791. The remainder, $957,770 was expended in 1790 and the following two years, in buying up public obligations.

The first report of the commissioners of the sinking fund[2] shows that they had promptly obeyed the law by buying $278,687 of debt, at the average rate of 54 cents on the dollar. Their second report[3] shows that $1,131,364 of stock had been bought for $699,163, an average of 62. This proves that the sinking fund of 1790 accomplished its purpose of raising the value of government stock.

The desirability of this had been urged by Hamilton in his "Report on the Public Credit."[4] The purchase of the public debt at market prices, which would be dishonorable before making provision for the debt, would be unexceptional afterward. Its effect would be in favor of the public creditors, as it would tend to raise the value of stock. The government would also gain by the heavy discount at which it would secure its earlier purchases. If it should

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[1] November 12, 1790.
[2] December 21, 1790.
[3] November 7, 1791.
[4] State Papers, Finance, Vol. I, 25.

decline to raise the value of its stock, enormous profits would be made by speculating foreigners. But if the government competes with speculators, it will not only reap a part of the profit itself, but its purchases will contract their field of operation and thus lessen their profit. It will also hasten the rise of stock, and thereby narrow the margin for speculation. Hamilton further urged the raising of money by foreign loans for purchases of the domestic debt. The growth of the country demanded an injection of foreign capital and, as the credit of the government was higher than that of any citizen, this could best be done by borrowing abroad to pay off debt at home.

As we have shown, the purchases of the commissioners raised the price of stock. At the same time they vindicated Hamilton's judgment on other points. The interest and arrears abroad were paid, we have said, by the proceeds of a new Holland loan for $1,200,000. This means that the government borrowed abroad that it might pay its revenues for 1790 to its own citizens. Enjoying a very high credit at this time in Amsterdam, it created five per cent. stock at four and a-half premium, that it might set free funds to purchase six per cent. stock at a discount of thirty or thirty-five per cent. It procured at five per cent. capital that enabled it to save eight per cent.

The sinking fund of 1790 was not called a sinking fund at the time, and strictly speaking, does not deserve the title. It was not a permanent appropriation, but a special appropriation of the revenues of a single year. It granted an indefinite surplus from a specific source, not a fixed sum from the general income. As surplus it was not inviolable, seeing it could be wiped out by extravagant legislation. On

the other hand, it appeared in a separate account, was under the control of special commissioners, and the income of the fund could be fed by loans. As these loans required eight per cent. to be set aside annually for extinguishing interest and principal, we have the complication of a sinking fund within a sinking fund.

In his report[1] of January 23, 1782, Hamilton, after announcing the success of the funding scheme, discusses the problem of amortization. The measures already taken indicate, he thinks, the intention of Congress to extinguish the debt as soon as possible. In pursuance of this intention Hamilton urges the establishment of a real sinking fund. The basis of such a fund would be the interest of such part of the debt, as should by purchase, payment, or otherwise, be acquired by the United States. This basis would be widened by a saving about to be effected in the foreign debt, and by the sales of public lands. Congress is therefore urged to adopt the principle, that all interest that shall lapse be set apart and appropriated, in the most firm and inviolable manner, as a fund for sinking the public debt. This fund should be placed under the control of the officials named for the direction of the former fund, and be by them applied to the purchase of the debt, until the annual income of the fund shall equal two per cent. of all the six per cent. stock; thenceforth to be applied to the redemption of the six per cent. stock. It is recommended to the consideration of Congress whether the sinking fund "ought not to be so vested, as to acquire the nature and quality of a *proprietary* trust, incapable of being diverted without a violation of the principles and sanctions of *property*."

[1] Finance, Vol. I, p. 146.

Changes Made by the Law of 1792.

The report of Hamilton led to the act of May 8, 1792, making further provision for the public debt. This act increased the funds in the hands of the commissioners by adding to the unexpended portion of the surplus of 1790 two items:

1. All interest accruing on stock purchased, paid off, or in any way acquired, by the treasury.
2. The unapplied part of all moneys appropriated to pay the interest on the public debt.

The charges upon the yearly income of this enlarged and progressive sinking fund were as follows:

1. An appropriation of eight per cent. in favor of any loans made in behalf of the sinking fund.
2. Purchases of the various stocks in due proportions, unless the income of the fund should equal two per cent. of the whole body of outstanding six per cent. stock.
3. In that case there should be paid yearly two per cent. on the outstanding six per cent. stock.
4. If there was any residue it should be used in buying any remaining stock.

All future purchases were to be made at the lowest price in the open market, or by opening sealed proposals. The commissioners were required to render quarterly accounts for settlement, and to make a full and detailed report of their proceedings to Congress early in each session.

The act of 1792 introduced two features that made the redemption fund of 1790 a real sinking fund after the English model. It permitted the stock held by one branch of the administration to draw interest from the treasury. It pledged the interest inviolably, and thus bound the government to a policy of amor-

tizing, even if compelled at the same time to create new debt at higher interest. With all this the sinking fund of 1792 was far inferior in efficiency to that of Pitt, inasmuch as, beyond the annual interest on stock held, it had no permanent appropriation. The British sinking fund of that time, on the other hand, received besides interest an annual grant from the treasury of one million pounds.

As the act of 1792 made no distinct appropriation from current revenues to the discharge of the debt, the action of the sinking fund was too slight to exhibit results. The practical effect of the new law was to add to the redemption nest-egg—the surplus of 1790—the regular interest accruing on stock therewith purchased. After this, the reports of the commissioners showed two purchases of stock—one with money arising from foreign loans made under the act of 1790, and one with money received as interest under the law of 1792.

When the new law passed into effect there stood to the credit of the commissioners government securities to the amount of $1,456,743. On these there would yearly accrue in interest $37,465. The annual interest account, therefore, the sole certain resource of the sinking fund, amounted then to less than $38,000, while aside from purchases, actual redemption of the debt could not begin till the income of the fund reached two per cent. of the outstanding six per cent. stock, that is, nearly $600,000. At this rate, unless greatly aided by the stubs of interest appropriations, the fund would not really redeem any part of the debt within a life time. So inadequate was the sinking fund to do aught but make occasional slight purchases of securities, that Congress at the next

session attacked in earnest the problem of debt reduction, and directed Hamilton to report a plan.

In December, 1792, Hamilton reported his plan The surplus of present revenues should, he thought, be devoted to contingencies, to buying stock, or to paying interest on the deferred 6 per cents. when, in 1802,they,too,should begin drawing interest. There remain but three methods of raising the $600,000 that constituted the two per cent. legally payable on the six per cent.stock : by loans alone,by taxes alone, or by a combination of these two. The first would be nothing but conversion and would effect nothing, unless the new loan could be placed at a lower rate than six per cent. The second method would put too severe a strain upon the revenue machinery. The third method, then, seemed the wisest. The combination of loans and taxes might assume different forms. Just sufficient taxes might be laid to meet the interest on the annual loan for redeeming the six per cent. stock, or such taxes might be laid as would suffice not only to pay the interest, but also to discharge the principal of the loan within a short and definite term. The latter plan commended itself to the secretary. Accordingly he elaborated an exceedingly complicated and intricate fiscal apparatus, by which the yearly imposition of $100,000 or more of new taxes should enable the government to redeem, by 1802, $5,500,000, and have on hand at that time an annual fund of $1,200,000 for further redemption, and for the $800,000 of interest on the deferred stock that should begin in 1802. The plan was very ingenious, but was never favored by Congress.

Complications.

An interesting chapter of politics arose out of the loans in behalf of the sinking fund. We have already seen how, by the two great financial measures of August, 1790, foreign loans to the amount of $14,000,000 were authorized, $12,000,000 to be devoted to the service of the existing foreign debt, and $2,000,000 to the purchases of the sinking fund. Hamilton strove to keep these loans separate, but found it impracticable. He therefore abandoned the attempt to keep the loans distinct, and issued stock upon the general authority of the two acts of Congress. Under these acts there were floated in Holland, between 1790 and 1794, no less than seven loans yielding $9,400,000 and payable in eleven to fifteen years. Of these funds about three millions[1] crossed the Atlantic and was swallowed up in the expenditures of a government, which had not yet succeeded in living within its income. The Indian war, the Whiskey rebellion, the hostile attitude of England, and the tribute to Algiers caused alarming deficiencies in the receipts. Under these circumstances the large sums drawn from abroad, though legally applicable only to the purchases of the sinking fund, were withheld and used for current expenses.

We find, therefore, that the results of the sinking fund were far inferior to what was expected and provided for. Up to April, 1795, at which time a new sinking fund had been formed, there had been expended by the commissioners besides the $226,263 of interest, that had accrued on stock held by them, only $1 392,672, being but $18,036 more than the surplus revenue of 1790, that had constituted the nucleus

[1] Hamilton's "Works," Vol. II, p. 438.

of the former sinking fund. After every allowance is made there remains $1,604,252 of the fund brought from abroad still unaccounted for, so far as the sinking fund is concerned, although the money was always brought in ostensibly for its use. It is not necessary to recount how the complications that Hamilton permitted to creep into the accounts resulted in attacks, charges, and an investigation. The fate of the loans on behalf of the sinking fund, however, emphasizes the fact that, despite the sinking fund, the government was creating debt considerably faster than it was cancelling debt.

By a statement of April, 1795, it appears that the commissioners had bought $2,307,661 of the three kinds of government stock with $1,618,936 of cash — an average price of 70. Besides this the commissioners had $209,426 of interest-bearing certificates representing a debt to French officers that the treasury had paid off, $151,640 of stock paid in by the state of Pennsylvania for a tract of land on Lake Erie, and $34,753 of stock paid in by individuals. Altogether there was $2,703,481 of stock on which the commissioners of the sinking fund drew interest from the treasury.

Before taking the next step let us pause and review briefly the whole financial legislation from the beginning of the government, as presented in Hamilton's final "Report on the Public Credit." He considers it under three heads:

1. The revenues established.
2. The provisions for funding the debt and paying the interest.
3. The provisions for extinguishing the domestic debt.

According to Hamilton's *resumè* the current revenues were derived from imports, tonnage, spirits, postage, patent fees, dividends of bank stock, snuff, sugar, auction sales, licenses and carriages. Of these, the first three were permanently pledged to the payment of interest on the public debt as long as it should last. The fourth and fifth were indefinite, the sixth source would remain as long as the government owned bank stock, and the rest were all temporary, expiring with the Congress that established them.

The three permanent taxes were charged in regular order with :

1. The current expenses up to $600,000.
2. The interest on the foreign debt.
3. The interest on the original domestic debt as funded.
4. The state debts assumed.
5. The balances to creditor states.

After satisfying these charges any surplus of the duty on spirits was permanently appropriated to the reduction of the debt. The surplus of the other two duties had no such ultimate appropriation.

From the eight laws reviewed by Hamilton it appears that legislation had devoted to the extinction of the debt:

1. The surplus of 1790 ($1,374,636).
2. The proceeds of all sales of Western lands.
3. A loan not to exceed two millions.
4. The unappropriated surplus of the duties on spirits.
5. The interest on any government stock acquired by the Treasury—except 8 per cent. on all sums borrowed under (3).

6. The surplus of any interest appropriation.

7. Certain special appropriations—those, namely, for that part of the debt owed to the United States Bank, ($1,400,000). Of these, all but the last item were under the control of the commissioners of the sinking fund.

As we have shown, despite all these elaborate and ambitious provisions, very little had been done. Hence, when Congress met in the session of 1794–5, the conviction was general that something really effective must be done to reduce the debt. The President, in his address to Congress observed, that the time had come "for a definitive plan for the redemption of the Public Debt." He urged Congress to "consummate this work without delay. Nothing can more promote the permanent welfare of the nation, and nothing would be more grateful to our constituents," and "we ought to prevent that progressive accumulation of debt which must ultimately endanger all governments."

The problems now confronting Congress required:

(1). That the twenty-seven millions of six per cent. stock be redeemed at the yearly rate permitted by the terms of contract, viz., two dollars on every hundred;

(2). That the $1,400,000 still owed to the United States Bank, due in seven annual instalments, be paid as it fell due;

(3). That the interest that should begin to accrue in 1801 on nearly fifteen millions of deferred six per cents be provided for;

(4). That in 1802, after the last instalment of the bank debt had been paid, there should begin the redemption of this deferred stock at the rate of two per cent. annually.

Such was the task to which Congress addressed itself. It was unanimously resolved to "put an end to that clamor which the durability of the debt has excited" by "making provision for the reduction of the debt," and attempting "honestly to provide an efficient sinking fund." It was while engaged in this task that Hamilton, on the eve of retirement, submitted, in perhaps the most brilliant of his state papers—his final "Report on the Public Credit"—a skillful and elaborate plan of debt reduction. So able was his review of the situation and so lucid and telling his reasoning, that his plan was adopted almost without change, and embodied in the act of March 3, 1795.

The Sinking Fund of 1795.

This act was a wide-reaching measure, disposing of the surplus revenues of the country for over a quarter of a century, and making final and definitive provision for $46,000,000 of the debt,—something over three-fifths of the whole. It greatly enlarged the province of the sinking fund commissioners, and made great additions to their appropriation, which now for the first time received the name of "Sinking Fund."

The salient provisions of this act were as follows:

It had been from the first the rule of the custom house to accept for duties over fifty dollars a reveuue bond running from four to twenty-four months. But this easing of importers by the granting of credits, resulted in supplying the treasury with bonds instead of cash. It therefore become necessary to anticipate the maturing of these bonds by making short loans from year to year. This had previously been within

the province of the Secretary of the Treasury. By the new law the commissioners of the sinking fund were empowered to borrow a sum not exceeding $100,000 annually, in anticipation of the revenue. These loans were always supposed to be made in behalf of the interest of the public debt, and to anticipate revenue devoted to that purpose.

The sinking fund was now enlarged by the following additional appropriations:

1. So much of the permanent duties as, with existing income, should enable the commissioners to pay, in 1796 and thereafter, a yearly two per cent. of the six per cent. stock.[1]

2. The surplus dividends on the government $2,000,000 of United States Bank stock after deducting the interest accruing on the remnant of the bank loan.

3. So much of the permanent duties as, with the surplus dividends, should suffice to pay a yearly $200,000 on the bank loan, till 1802, and then begin the redemption of the deferred stock.

4. The proceeds of the sale of public lands.

5. The proceeds of debts inherited from the old government.

6. All revenue surpluses of any year remaining unappropriated during the next session of Congress.

These appropriations were to continue until the entire existing domestic debt of the nation, as well as loans in aid of it, should be totally extinguished. The sinking fund thus constituted was, on the faith of the United States pledged and inviolably vested, in trust, in the commissioners, for the redemption of

[1] Except balances to creditor states. This restriction was removed April, 1796.

the public debt. Its resources could not be diverted to any other object till the only outstanding debt was the three per cent. stock. Then Congress might use the money as it saw fit.

The commissioners held the resources of the sinking fund as a proprietary trust clothed with the sanctions of private property. They superintended all payments on behalf of the principal of the debt. In order that the apparatus for amortization might be complete and independent of external aid, the commissioners were clothed with authority to make loans needful for carrying out its tasks.

The act contained another provision worthy of notice. Although heavy instalments were soon to fall due on the Dutch debt, no authority was given to the commissioners to pay them. This was owing to the hope that the treasury might be relieved of the payments abroad. This act of 1795 ordered that new stock be offered to foreign creditors in exchange for the old. This new stock bore interest one-half per cent. higher than the old, and payable in the United States. The principal was redeemable at the option of the government. It was confidently expected that the plan of conversion would succeed, and the treasury would thus be relieved sufficiently to carry out the project of redeeming the home debt.

The sinking fund of 1795 was the most rigid that could be devised. The law sought to fix the policy in regard to the debt for many years to come. In his next report Secretary Walcott observed that "As the injunctions of the law upon the commissioners of the sinking fund are unconditional, and as permanent funds have been invested and appropriated, it is conceived that a successive reimbursement annu-

ally of the debt . . . . has become an irrevocable stipulation with the creditors."

With the close of this review of Hamilton's financial system it may be well to inquire how far Hamilton and his party were influenced by the erroneous ideas that at this time ruled in English finance. It is just here that a political controversy has raged. The Federalist writers have eagerly sought to show that our early fiscal history was uninfluenced by a theory, afterwards so ignominiously abandoned.

Mr. Henry C. Lodge says of the sinking fund :

> This was nothing more than the ordinary sinking fund as it is used and understood at the present day, not only in all civilized governments, but in innumerable corporations. It was merely a plan for actual savings to be applied to the extinction of debt. But coming at a time when Pitt used sinking fund as a term to conjure with, and by ingenious calculations of the rate of interest was perfecting a juggle, which served to blind a whole generation of Englishmen and which actually led them to believe that debts could be extinguished, not by payment, but by further borrowing, this arrangement is interesting from its business-like simplicity and sense. There was nothing of Pitt's ingenuity about Hamilton's plan. For him the sinking fund was a convenient business device, nothing more. He had too keen a mind to be deceived himself, and he had no wish to corfuse and befool others. . . . . He put forth his scheme of funding and sinking not as the incantations of an enchanter by which debts could be paid without saving but as business-like arrangements . . . . [1]

This comparison of Pitt and Hamilton seems hardly just to the former. Pitt's sinking fund was by no means the piece of pure folly that people imagined. It started with a clear surplus and, though over-intricate, would have done well enough if war had not broken out in 1793. It was in refusing to suspend it then that the great mistake was made. But this mistake would not have been made, had not his sinking

[1] Lodge's "Life of Hamilton," p. 93.

fund been founded with wrong notions as to its nature, and vain hopes as to its effacacy,

But there are other errors besides those relating to the effectiveness of a sinking fund at compound interest which may lead to the mistake of keeping up amortization in borrowing times. Such a mistake may quite as well flow from over-hasty solicitude for the public credit, or from too tender a care for the lender, as from the compound-interest illusion. Certain it is, that Hamilton induced Congress to lock up the revenues as securely as possible against legislative discretion, or the demands of an emergency.

In his "Reports," Hamilton recommends the maxim, that "the creation of debt should always be accompanied with the means of extinguishment." In a note he refers to Pitt's one per cent. sinking fund of 1792-98, and adds, "Let the United States never have to regret hereafter that they postponed too long so provident a precaution." Further he recommends an inviolable application of the fund, suggesting that it be "clothed with the character of private property" and its application be made "a part of the contract with the creditors." "Experience has shown . . . that a simple appropriation to the sinking fund is not a complete barrier against its being diverted when immediate exigencies press. This indicates the utility of endeavoring by additional sanctions to give inviolability to the fund."

The sinking fund as "the essential basis of credit" must be maintained even in deficit periods, for "the emergencies which induce a diversion of the fund are those in which loans, and consequently credit, are most needed." On this Professor H. C. Adams pithily remarks: "It is an error to say that public

credit is dependent upon maintaining inviolable payments; it depends rather on simplicity in public accounts and upon energy, on the part of the administration, in the prosecution of whatever purpose it undertakes."[1]

Mr. Henry Adams, in his "Life of Gallatin," summarizes Hamilton's work:

"Adhering more or less closely to the English financial theories then in vogue, he had intentionally constructed a somewhat elaborate fabric, of which a considerable national debt was the foundation.[2] . . . . One of the several English ideas adopted by Mr. Hamilton from Mr. Pitt was a sinking fund apparatus. Even at that time of Mr. Pitt's supreme authority it can hardly be conceived that any one really believed a sinking fund to be effective so long as a government's expenditure exceeded its income; it was, however, certainly the fashion to affect a belief in its efficacy at all times, and although, if Mr. Pitt and Mr. Hamilton had been pressed on the subject, they might perhaps have agreed that a sinking fund was always expensive and never efficient except when there was a surplus, they would in the end have fallen back on the theory that it inspired confidence in ultimate payment of the debt. Their opponents would not unnaturally consider it to be a mere fraud designed to cover and conceal the true situation.[3] . . . . In theory Mr. Hamilton also was in favor of discharging the debt, and originated the machinery for doing so; that is to say, he originated the sinking fund machinery, or rather borrowed it from Mr. Pitt, although this financial juggle has now become, both in England and America, a monument of folly rather than of wisdom."[4]

Gallatin criticized "the mystifying and useless machinery, with which Mr. Hamilton, had in imitation of Mr. Pitt, encumbered the very simple subject of paying the debt," and declared that the appropriations subsequent to 1795 "do not seem to have produced any other effect than that of rendering still more complex a system in its nature sufficiently

[1] "Public Debts", p. 265.
[2] "Life of Gallatin", p. 167.
[3] "Life of Gallatin", p. 173.
[4] "Life of Gallatin", p. 174.

intricate." Upon the strength of Gallatin's criticism Randolph, in a report of the ways and means committee, alleged that "no effectual provision for the final redemption of the whole present debt of the United States does at this time exist," and added the sneer, "To the measures which have already been adopted in relation to this subject, their complexity forms an objection inferior only to their insufficiency."

With the weight of authority backing up conclusion from the facts it would seem no longer possible to deny that our early finance was too much influenced by English precedent.

Let us see what grounds there were, in 1802, for Gallatin's severe criticism upon the structure reared by the hands of Hamilton. The main object of the law of 1795 was to secure the regular payment of the six per cent. and deferred stocks. By this law they were virtually converted into a terminable eight per cent. annuity, expiring in twenty-three years from the first payment. Agreeably to this idea no distinction was made between the interest account and that of the principal. The regular dividend of 1½ per cent. on the nominal capital was paid on the last day of March, June and September, and 3½ per cent. on the last day of each year.

To liberate the revenue for this purpose it was the intent of the law, as we have seen, to convert the Dutch debt into home debt by offering an increase of ½ per cent. in the rate of interest. By this operation would be made optional the redemption of over $14,000,000 then approaching maturity, and the amortization of the 6 per cents. could proceed according to plan.

The efforts of Wolcott to convert the balance of the debt to France were successful, and $1,848,900 of 5 per cent. stock, and $176,000 of 4 per cent. stock were converted into equal amounts of domestic stock, known as the "5½'s" and "4½'s" of 1795. The rest of the foreign debt was due to the Dutch capitalists in Amsterdam and Antwerp. These declined to exchange their nearly matured stock for new domestic debt, so the project failed. Thus the first defect in the plan of 1795 was, that the government found itself compelled to provide, according to contract, for the payment during the next fifteen years of $12,200,000 not contemplated in the plan.

Another unforeseen difficulty arose in 1796. We have seen that the sinking fund was charged for seven years with an annual $200,000 on account of the subscription loan from the United States Bank. But there were other bank loans unprovided for, viz., temporary loans in anticipation of the revenue tied up in revenue bonds. These were of three kinds: loans for current expenses, loans by the commissioners for the interest on the public debt, and loans, funded on the revenues, for specific purposes, such as the Indian war, the ransom and tribute to Algiers, and the Whiskey insurrection. For most of these loans were pledged the actual revenues of the current year, when they should fall due the next year. But as next year's taxes were likewise tied up from next year's needs, the pledged taxes, when they finally *did* reach the treasury, were all absorbed in current expenses. So the temporary bank loans once made were constantly renewed, until, on January 1, 1796, they amounted to $6,200,000. As by its heavy accommodations ($6,000,000) the United States Bank

had parted with two-thirds of its capital, and seriously crippled its operations, it pressed for payment of its loans as they fell due. Thus one year after "permanent and effective provision" had been made for the debts of the United States, the commissioners were embarassed by a call for $400,000 from Holland, and one for $4,600,000 from the United States Bank. These constituted an unlooked-for demand of $5,000,000.

To meet the emergency the commissioners were authorized to borrow to the extent of $5,000,000. For this they were to issue funded 6 per cent. stock, not redeemable before 1819. For its redemption were pledged the funds to be released by the extinction of the old 6 per cent. stock in 1818. In case they saw fit the commissioners were allowed as a final resource to sell the shares of the United States Bank, held by the government.

The delay of an opposition Congress, both in laying new taxes and in funding the floating debt, had greatly injured the credit of the country. When the commissioners essayed to place the $5,000,000 loan the stock found few purchasers and the attempt proved abortive. The market was already loaded with stock, and after several months only $80,000 had been taken, for which $70,000 was received.

Finally part of the United States Bank stock held by the government was sold. This was a serious invasion of the sinking fund, seeing that one of its resources was dividend on bank stock. Hamilton denounced it as an infatuated step, and a fatal invasion of the system for paying the debt. Wolcott, too, opposed it, but necessity compelled. Accordingly 2,780 $400-shares of bank stock were sold at 25

per cent. premium, yielding $1,384,260. This sum afforded such relief as permitted a postponement of the balance, which was subsequently paid out of current revenues. As to the $400,000 due Holland, the government was enabled to pay it by an unexpected increase of the revenue.

By these means the commissioners were tided over the difficulties of 1796. But the experience had served to show the defects in the system, and in his report of December, 1796, Secretary Wolcott called for an additional yearly million and a quarter to carry out the plan of redeeming the debt. He suggested a direct tax on the states, but the proposal was rejected, and Congress laid additional duties for the payment of the Dutch debt and the bank loans. At the same time, an act was passed authorizing the receipt of evidences of public debt in payment of land in the Northwest.

Though these measures were inadequate, the year 1797 was a prosperous year, and $1,627,414 of the regular revenues was expended in reducing the debt. Had it not been for the defensive measures occasioned by the hostile attitude of France, the great era of debt payment might have dated from this year instead of from 1801.

Likewise in 1798 the revenues were prolific, and with ordinary expenditures there would have been a large surplus for the debt. But the war appropriations obliterated this margin and went far beyond. It was decided to lay a direct tax of $2,000,000 on the states, and the President was authorized to raise a tax-loan of two millions in anticipation of this amount. Another loan for $5,000,000 was authorized reimbursable after fifteen years. For its service was

pledged the surplus of import and tonnage duties beyond the permanent appropriation charged thereon, and the faith of the United States was pledged to make up any deficiency. The President was furthermore authorized to add vessels to the navy and issue as payment six per cent. stock redeemable at pleasure. By this authority there was issued in 1799, $711,700 of this stock, known in our financial history as the "navy six per cents."

When the $5,000,000 loan came to be filled, it was found that the traditional rate of six per cent. was too low for placement at par. Accordingly eight per cent. was offered and the loan was filled at this rate. But this brought to light the danger lurking in Hamilton's policy of rigid amortization. The very year the eight per cent. stock was issued, the commissioners expended $638,000 on behalf of the principal of the six per cents. The interest loss occasioned by this one amortization was therefore $12,760 a year during the whole period of the eight per cents. A similar loss would be shown on each of the subsequent payments that redeemed 6 per cents, when 8 per cents might have been amortized.

On February 28, 1800, the committee on ways and means announced a probable deficit for that year of $3,500,000. A new loan for this amount was accordingly recommended. In a later report the committee brought forward a plan for sinking this loan and the $5,000,000 loan of the preceding year. At eight per cent. the annual interest charge would be $680,000. Besides this there should be provided a sinking fund sufficient for a yearly payment of two per cent. on the principal. This would call for $170,000. As the term of the $5,000,000 loan, how-

ever, forbade any reimbursement for ten years, it was proposed to apply the annuity for ten years to the general purchase of the public debt. The plan, therefore, contemplated a sinking fund payment of $170,000 for ten years, and then a ten per cent. annuity terminable in fourteen years. This extreme anxiety to begin amortizing a loan at its very creation shows the influence of Pitt's sinking fund of 1792.

In accordance with these recommendations Congress authorized a loan for $3,500,000, reimbursable after fifteen years. Under this authority $1,481,700 of eight per cent. stock was issued, for which was received $1,565,229, being a premium of $83,529, or nearly five and three-quarters per cent. Thus, as will be explained in Chapter III,[1] the annual interest included a small sinking fund payment. To raise the annual $850,000 planned by the committee, additional revenues to that amount were provided by the revenue act of May 13, 1800, and were exclusively appropriated to the discharging of the interest and principal of the public debt "heretofore contracted, or to be contracted, during the present year."

This closes the chapter of Federalist financiering. Our next task is to show how the Federalist system was criticised and mended by financiers of another school.

The year 1801 saw the consummation of a political revolution that established in power a party pledged to the payment of the debt. Jefferson later declared that his administration made all other objects subordinate to this, and his finance minister, Gallatin, replied that "the reduction of the debt was certainly the principal object in bringing me into office."[2]

[1] Page 101.

[2] Adams' "Life of Gallatin", p. 270.

The new secretary brought to his task views different from those heretofore ruling in our financial policy. The divergence appears clearly in the debate of January, 1800. In a passage alluding to England, Mr. Harper said:

"Her present minister, at the commencement of his administration in 1783, established a permanent sinking fund, which now produces very great effects; he also introduced a maxim of infinite importance in finance which he has steadily adhered to, that whenever a new loan is made the means shall be provided not only of paying the interest, but of effecting a gradual extinction of the principal." . . . . "These ideas, profiting by the example of England, we have adopted and are now practicing on. We have provided a fund which is now in constant operation, for the extinguishment of our debt. This fund will extinguish the foreign debt in nine years from now, and the six per cent., a large part of our domestic debt, in eighteen years. I trust we shall adhere to this plan, and whenever we are compelled by the exigency of our affairs to make a loan, by providing also for its timely extinguishment, we may always avoid an inconvenient or burdensome accumulation of debt."

Mr. Gallatin, in reply, laid down a principle not acknowledged by English statesmen till Hamilton's *exposé* in 1813.

. . . . "I know but one way that a nation has of paying her debts, and that is precisely the same which individuals practice, 'spend *less* than you receive,' and you may then apply the surplus of your receipts to the discharge of your debts. But if you spend *more* than you receive, you may have recourse to sinking funds, you may modify them as you please, you may render your accounts extremely complex, you may give a scientific appearance to additions and substractions, you must still necessarily increase your debt. If you spend more than you receive, the difference must be supplied by loans; and if out of these receipts you have set a sum apart to pay your debts, if you have so mortgaged or disposed of that sum that you cannot apply it to your useful expenditure, you must borrow so much more in order to meet your expenditure. If your revenue is nine millions of dollars and your expenditure fourteen, you must borrow, you must create a new debt of five millions. But if two millions of that revenue are, under the name of sinking fund, applicable to the payment of the principal of an old

debt, and pledged for it, then the portion of your current revenues applicable to discharging your current expenditures of fourteen millions is reduced to seven millions; and instead of borrowing five millions you must borrow seven; you create a new debt of seven millions, and you pay an old debt of two. It is still the same increase of five millions of debt. The only difference that is produced arises from the relative price you pay for the old debt and the rate of interest you pay for the new. At present we pay yearly a part of a domestic debt bearing six per cent. interest, and of a foreign debt bearing four or five per cent. interest; and we may pay both of them at par. At the same time we are obliged to borrow at the rate of eight per cent. At present, therefore, that nominal sinking fund increases our debt, or at least the annual interest payable on our debt."[1] . . . .

It may be asked why, if Gallatin saw through the sinking fund illusion, did he adopt the sinking fund machinery into his system? The answer is given in his own words. He says of debt payment:

"As to the forms adopted for attaining that object, they are of quite subordinate importance. Mr. Hamilton adopted those which had been introduced in England by Mr. Pitt, the apparatus of commissioners of the sinking fund, in whom were vested the redeemed portion of the debt, which I considered as entirely useless, but could not as Secretary of the Treasury attack in front, as they were viewed as a check on that officer, and because, owing to the prejudices of the time, the attempt would have been represented as impairing the plan already adopted for the payment of the debt. I only tried to simplify the forms, and this was the object of my letter[2] to the committee on the ways and means. The injury which Mr. Pitt's plan did was to divert public attention from the only possible mode of paying a debt, viz., a surplus of receipts over expenditures, and to inspire the absurd belief that there was some mysterious property attached to a sinking fund which would enable a nation to pay a debt without the *sine qua non* condition of a surplus. . . . . But the only injury done here by the provisions respecting the commissioners of the sinking fund, and by certain specific appropriations connected with the subject, was to render it more complex, and to make the accounts of the public debt less perspicuous and intelligible. Substantially they did neither good nor harm. The payments for the public debt and its redemption were

[1] Adams' Gallatin, p. 229.

[2] Finance, Vol. I, p. 746.

not in the slightest degree affected, either one way or the other, by the existence of the commissioners of the sinking fund, or by the repeal of the laws in reference to them. The laws making permanent appropriations were much more important. Even with respect to these it is obvious that they must also have become nugatory whenever the expenditure exceeded the income. Still they were undoubtedly useful by their tendency to check the public expenses."[1]

So much for criticism of general policy. In his above mentioned letter Gallatin presented the case against the existing situation.

There existed at this time as a vested and inviolable fund only the appropriations of March 3, 1795. This fund provided regularly for an eight per cent. annuity on the six per cent. stock. After this payment had been taken out there remained for the Dutch debt, four and a half per cent. stock, five and a half per cent. stock, $80,000 of six per cent. stock, and bank loans, only the surplus of revenues and the receipts from public lands. The former had so far yielded nothing and could not be looked upon as a sure and inviolable source, as long as Congress had power utterly to defeat this provision by heavy appropriations for other objects. The latter item,estimated at $400,000 a year, though applicable to any part of the public debt (except the eight per cent. stock and navy sixes) not already provided for,was totally inadequate even for the Dutch debt. It is true additional duties had been imposed in 1797 for these purposes, but they would not yield over $500,000 yearly, while for six years yet, the Dutch debt alone would require an average of $1,600,000. Without better provision the Dutch instalments would continue, in the future, as in the past, to be paid hap-hazard and without authority.

[1] Adams' Gallatin, p. 296.

There were in fact several enactments, since 1795, providing for the Dutch debt, the bank loans, and the $7,271,900 of new stock, but this supplementary legislation was not engrafted upon the original plan. The auxiliary resources were not a part of the sinking fund, were not vested in the commissioners, nor pledged on the faith of the United States, and were, therefore, repealable at will of Congress without breach of contract with the public creditors. Such legislation, thought Gallatin, could not be held to be part of a permanent provision for redeeming the public debt. Moreover, these appropriations, not being accompanied by an imperative clause directing payment, enjoyed no priority over appropriations for current expenses. All alike rested on moneys in the treasury, and, if any must go unsatisfied, the choice lay with the Secretary of the Treasury. A hostile secretary might favor other appropriations and thus defeat the provision made by Congress for the redemption of the debt. In view of these facts Secretary Gallatin pronounced the existing provisions for the public debt not only intricate, difficult of execution, uncertain in amount, and dependent on the will of the legislature, but even inadequate and precarious.

The Sinking Fund of 1802.

To remedy these defects Gallatin made recommendations which were embodied in the law of April 29, 1802. The object of this law was to make as secure a provision for the whole public debt, as the law of 1795 had made for the six per cent. and deferred stocks. It reorganized the sinking fund by adding to it: (1) The funds appropriated for inter-

est on the debt; (2) enough of the revenues to bring the whole up to $7,300,000.

An annual payment of $7,300,000 was vested in the commissioners of the sinking fund for the entire debt service. All payments on account of the debt in the way of interest, contingent charges, or reimbursement, were under the superintendence of the commissioners. These were to be made in the following order:

First, Those payable from the old sinking fund.

Second, The interest and charges on the present debt, or on future loans on behalf of the debt.

Third, Instalments due on existing debt.

Fourth, Purchases of existing debt.

The commissioners were empowered to distribute the burden of the Dutch debt more evenly over the eight years following by short reloans, and were directed to apply the sum thereby disengaged to redeeming the domestic debt.

This, then, is the gist of the enactment. After repealing the obnoxious internal duties, the annual revenue was estimated at $9,950,000. The annual expenses, with close economy, were put at $2,650,000. This left $7,300,000. This was but little above the $7,000,000 actually required for the years 1802–3–4, when the heaviest instalments of the Dutch debt were to fall due. A like sum, though not required, could still be profitably applied until the year 1810, by paying off minor stocks such as the four and a-half's, five and a-half's, navy sixes, bank loans, and eight's. After 1810 so large a sinking fund could be used only by buying three's on the market. The law of 1802, then, signified the resolve to continue the burden required for the next three

years, until the national debt should be fully paid. But it signified more. In 1802, under the existing law there would eventually have been carried to the sinking fund a clear surplus of $1,200,000. And so, perhaps, for succeeding years. But this annual surplus was, as we have seen, a precarious thing affording no security to the public creditor, because contingent upon government expenses. This uncertainty the law of 1802 remedied by anticipating the surplus, and setting it apart to the sinking fund in advance of all budgetary appropriations.[1] Hereafter all payments for the debt up to $7,300,000 were to enjoy a priority over current expenditures. The government must support itself on the leavings of the sinking fund.

The act of 1802 was strictly supplementary to the plan of amortization adopted in 1795. It simplified the existing system by rolling into one the batch of special assets; it enlarged it by adding about $1,200,000 to its certain income; it modified it by turning the interest appropriations into the sinking fund, at the same time charging that fund with the entire debt service. But not a single resource of the old fund was deranged or altered.[2]

Owing to the productiveness of the revenues, the redemption of the debt was not checked by the necessity of providing for the $11,250,000 of six per cent. stock created for the Louisiana purchase. The sinking fund was, in 1804, enlarged to $8,000,000 and charged with $700,000 of new interest.

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[1]The civil list, however, had always a first lien on the revenue for $600,000.

[2]This same year one of the items constituting the old sinking fund lapsed, owing to sale of the bank stock.

In 1806, owing to certain abuses in the land offices, Congress repealed the old device of raising the value of government stocks by accepting them in payment for public land. At the same time the sinking fund commissioners were freed from certain hampering restrictions regarding time and manner of purchasing the public debt, while the limiting par value of three per cents was fixed at sixty.

From 1802 the revenues constantly exceeded estimates, and, with an overflowing treasury, the payment of the debt proceeded with unprecedented rapidity. The eight million sinking fund was further enlarged by surpluses, so that the payments on the principal of the debt rose from about $3,207,000 in 1804, to $3,905,000 in 1805; to $4,828,000 in 1806; to $3,729,000 in 1807; and to $6,986,000 in 1808. It was accordingly recommended by Gallatin, and authorized by the act of February 11, 1807, that the unredeemed portion of the sixes, existing in the form of eight per cent. annuities, be exchanged for a common six per cent. stock, redeemable at will. The three per cents also were to be converted at sixty-five into similar stock. The object of this scheme was to enable the sinking fund to continue its amortization without too free a resort to the stock market. The operation was only partially successful. $6,294,051.12 of "exchanged sixes" were issued, but only $11,859,850.70 of the "converted sixes." Later, as we shall see, a similar attempt was made, but with a different purpose.

The Embargo, the Non-Importation Act, and the disturbance of commerce by foreign restrictions, shrunk the receipts frightfully in 1808, 1809, and 1810. It was even found necessary, in order to

maintain the sinking fund intact, to authorize, in 1810, a temporary loan from the United States Bank of $2,750,000. The debt made and the debt paid were both at six per cent., so the transaction was merely nominal. The new debt was charged upon the sinking fund, and was paid off the next year. The operation was in effect a partial suspension of amortization for one year.

In his report at the close of 1811, Gallatin reviews the amortization since 1801. As the treasury was now closing a debt-paying period and entering upon a debt-creating period, it may be well to look back over the fiscal operations, and note what impression had been made on the debt. The inherited debt and accrued interest to 1791 amounted, when funded, to $76,781,953.14. The Federalists in ten years reduced this to $72,733,599, but added $7,193,400 of new stock, mostly at eight per cent., thus bequeathing a burden of $79,926,999 to their successors. Of this, Gallatin's sinking fund extinguished $46,022,810 between 1801 and 1811. The purchase of Louisiana, however, added $11,250,000 to the principal, so that on January 1, 1812, the public debt was $45,154,189, over thirty-one millions less than the original Revolutionary debt.

In 1801 there were twelve species of stock outstanding. Eleven years later there were only five kinds at two rates of interest, viz.: three per cent. and six per cent. From 1801 to 1812, the regular application of $8,000,000 to the debt had been threatened, first with dearth of redeemable stock, and later with dearth of revenue, but each crisis had been met, so that the operations of the sinking fund had continued uninterrupted. The debt yet outstanding consisted

chiefly of the eight per cent. annuities, the practically irredeemable three's, and the Louisiana stock not payable till 1818. If no more debt were created, there could be applied yearly till 1818 only $3,792,382 all told. The remaining $4,200,000 of the sinking fund was not applicable to the debt, unless public stock fell below a certain par fixed by the act of 1806. As long as this untoward event did not occur, the surplus of the sinking fund was, by the law of 1802, available for current expenses. Should it occur, the government would be obliged to revert to the costly practice of buying stock and placing stock in the same market at the same time.

The Sinking Fund during the War.

The war measures of 1812 included a loan of eleven millions charged upon the sinking fund, an issue of treasury notes at five and two-fifths per cent. interest constituting a secondary charge on the sinking fund, and a project to release the sinking fund from the $1,570,000 annually due on the principal of the eight per cent. annuities. As formerly, so now, the idea was to convert the unpaid principal of these annuities into six per cent. stock. Had the project succeeded the emancipation of the sinking fund from the old debt would have been complete. As it was only about three millions were exchanged, that is, less than one-fifth of the whole.

There was paid out of the sinking fund during 1812 $4,710,954.39, of which $2,259,681 was applied to principal of debt. The balance of the eight million appropriation was applicable to the demands of the next year. In 1813 there was paid out on account of the sinking fund over eleven millions, used mainly

for redemption of treasury notes, repayment of temporary loans, and interest on the new war loans. Purchases of stock amounting to $412,497 were also made. In 1814 the sum expended for old debt, interest of new debt, temporary loans, and treasury notes, was $8,386,880. Of this, not over $1,475,000 was in payment of old debt. The sinking fund, then, may be reckoned to have cost the government very little during the war, thanks to the happy device of charging upon the sinking fund each year the payment of some millions of treasury notes and temporary loans. On this matter Professor H. C. Adams remarks:

"During the continuance of the war there was no redemption of permanent indebtedness, except such as had been entailed by the law of 1795. We find, in the financial administration of this war, no application of the pernicious theory that every loan should be accompanied by the means of its own extinction."[1]

Meanwhile, war debt was being rapidly piled up on the sinking fund. On December 31, 1815, the debt was estimated as follows:

Old debt remaining	$ 39,905,183.66
Funded war debt	49,780,322.13
Treasury notes	18,452,800.00
Temporary loans	550,000.00
Total burden on the sinking fund	$108,688,305.79

The sinking fund was at that time composed of

Interest on stock held by commissioners,	$1,969,577.64
Receipts from the public lands	800,000.00
From duties	5,230,422.36
Sinking fund	$8,000,000,00[2]

[1] "Public Debts," p. 268.

[2] Finance, Vol. II., p. 916.

On September 30, 1815, the total burden on the sinking fund had increased to $119,635,558.46.

All the loan acts of the war had contained a paragraph directing the commissioners to pay the interest and reimburse the principal when due, and to purchase the stock at or below par whenever they should see fit. The faith of the United States was invariably pledged to make up any deficiency in the appropriation for the debt. Owing to great financial stress and general failure of loans, the loan act of November 15, 1814, in addition to the above, gave the further assurance that special funds would be added to the sinking fund appropriation, during that session of Congress, for the loan then authorized, and that the sinking fund would be permanently increased, so as to extinguish the public debt.

Reorganization.

At the close of the war, it was evident to all that a sinking fund of $8,000,000 could never support the funded debt and, at the same time, discharge punctually the whole principal and interest of annual issues of treasury notes, amounting to eight or nine million dollars. The vigorous head of the treasury, therefore, proposed:

First—That the sinking fund be relieved of the treasury note debt by funding the notes;

Second—That the sinking fund be applied first to paying the old eight per cent. annuity;

Third—That it be applied next to discharge of the temporary loans of the war;

Fourth—That it be applied then to the interest on the war loans;

Fifth—That the surplus be applied in purchasing the war debt.

In the matter of funding the treasury note debt, Congress followed Dallas' advice. The act of March 3, 1815, authorized a loan of $18,452,800, that being the sum required to cover the outstanding notes. Under this authority, a loan for twelve millions was opened. Six per cent. stock to the amount of $12,288,147.56 was issued, which sufficed to absorb about $11,700,000 of treasury notes.

In his report of December, 1815, Dallas estimated that, with treasury notes and temporary loans out of the way, the regular charge on the sinking fund for interest and obligatory reimbursement of the old debt would be $7,660,000. This left only $340,000 annually applicable to the principal of the new war debt. This scale of reduction was evidently incommensurate with the national ability. So greatly had the debt risen that, in order to provide for it as generously as Gallatin's sinking fund of eight millions had provided for the eighty-five million debt of 1804, the annual appropriation must be increased to $10,500,000. Dallas, however, proposed to add but two millions to the existing appropriation. The sinking fund thus reorganized would extinguish the public debt in about eighteen years.

A year later, Secretary Crawford urged similar measures upon Congress. On these recommendations, the committee of ways and means submitted a report on January 14, 1817. They observed that the reorganization of the sinking fund had been deferred till the revenue system should receive a permanent form, and the peace footing should be determined. Meanwhile, no time had been lost, for the surplus revenues had been used in reducing the floating debt (arrearages of military expense), and re-

tiring the unfunded treasury notes. Including these classes of debt, the sum applied to amortization during 1816 was no less than $24,000,000, while a balance of ten millions remained in the treasury. The overflowing revenue, which made possible so large a reduction in one year demonstrated, to the satisfaction of the committee, that the resources of the nation were ample to effect within a reasonable length of time the extinguishment of the whole debt.

"As the numerous and often incongruous provisions of the present laws in relation to the sinking fund require a general revision," the committee reported certain propositions. They recommended a permanent sinking fund appropriation of $10,000,000, and proposed also an additional special appropriation for 1817 of $9,000,000, together with $4,000,000 more, to be considered as an advance on account of the regular payment of the succeeding year. This was in view of the ample revenues of 1817, and of the fact that there is a disadvantage in keeping idle in the treasury money destined to pay the principal of a debt. The committee urged the further appropriation to the sinking fund of all surpluses above $2,000,000.

In adding to the amount of the sinking fund, it appeared wise to simplify its operations. There was then standing on the books of the treasury and credited to commissioners of the sinking fund nearly $34,000,000 of stock of fourteen different descriptions, and bearing seven different rates of interest. On this stock interest was supposed regularly to accrue and to be paid, with no other effect than that of adding to the labors of those who wished to understand the accounts of the government. The

committee proposed, therefore, that all certificates of public debt, when redeemed, should be destroyed. It is true the proposed change would not effect the diminution of the debt, but "if the saving of trouble in making up the accounts be nothing, it is yet important that their state be such as to admit of being easily and generally understood, and that what is in itself plain should not be obscured by the introduction of a useless fiction."

The Sinking Fund of 1817.

The bill reported by the committee was passed. By the act of March 3, 1817, the government—after having withdrawn its circulating notes, liquidated its floating indebtedness, revised the revenue system and fixed the peace establishment—redeemed the promise given in the loan acts of the war. This time the reorganization of the sinking fund was far more radical than any former change. The first clause of the act repealed all previous acts of Congress making provision for the service of the debt. All the other enlargements had kept the existing fund as a nucleus and built up around it a new fund by additional appropriations. This act was the first act that swept away all previous make-up of the fund, and started with clear ground. It simply vested in the commissioners, for the service of the debt, an annual sum of ten millions from the permanent revenues of the government—import duties, internal taxes and public land sales. In addition to this fixed payment, there was appropriated for 1817 a sum of nine millions and, if deemed expedient by the Secretary of the Treasury, a further sum of four millions on the payment of 1818. Furthermore,

any yearly surplus above two millions was to be paid over to the commissioners.

The application of the sinking fund thus rehabilitated was to conform to the previous engagements with the public creditors. When in any year the sinking fund should exceed the sum directly applicable to the service of the debt, the surplus should be applied to the purchase of stock at the market price, providing it did not exceed the following: for threes 65, for sixes par, for sevens no higher in proportion than for the sixes. In time of war any surplus, beyond the payments on account of the debt called for by the public engagements, might be applied to the public service.

The act, furthermore, directed that all the accumulated certificates of stock, as well as those thereafter to be acquired, were to be cancelled or destroyed, and "no interest was to be considered as accruing on them."

In the redemption plan of 1817 the sinking fund reaches almost the extreme of simplicity. It is true the payment on behalf of the public debt still went to a separate account, and was payable in theory to a special board. But the cunning and complicated apparatus of Hamilton and the English financiers had been done away with. There was no fixed payment on account of the principal of the debt, no inviolable appropriation, no sinking fund composed of specific items of revenue, no contract with the creditors, no automatic purchasing machinery, no borrowing on behalf of the fund, no hoarding of paid off debt, and no payment of interest thereon. Simplicity and common sense had triumphed.

Unlike the earlier enactments of that of 1817 contained no limitation to existing debt, such as had so often spoiled the plans of redemption. The new sinking fund was not, however, applicable to the service of all the public indebtedness. Besides the temporary loans and treasury notes charged upon other appropriations, there were $7,000,000 of five per cent. stock exchanged for shares of the new United States Bank, of which the interest and principal would be more than defrayed, it was estimated, by the dividends, or by the sale of the shares; and over four millions of non-interest bearing Mississippi stock, issued to meet the Yazoo claims, and charged upon the receipts from Mississippi lands. This left the burden on the sinking fund about one hundred and ten millions.

The history of the sinking fund of 1817 is not eventful. During 1817 there was applied to the debt $25,423,036.12, and in 1818 $21,296,306.04. But during the years following the sum applied to the debt, owing to the reaction from the prosperity of 1816, fell short by nearly twelve millions of the amount appropriated by law. The total deficiency of $3,000,000 for the first seven years was made up in following years. This deficiency was, however, partly due to the fact that most of the debt was not yet reimbursable, the twelve-year term of the war loans being yet unexpired. The application of money to the debt was, however, furthered by a clause in the bank act of 1816. This provided that $21,000,000 of the capital stock of the United States Bank might be subscribed in public stock, which the government should have the privilege of buying of the bank at the rate permitted by law.

In the years 1825-1828 the war debt fell due. In 1822 and the years following three attempts had been made to refund a part of this debt at a lower rate, in order to save interest and to distribute the burden of payment of the four years over the three following years, when no part of the debt fell due. The attempts failed almost entirely, because the rate of interest (four and a-half per cent.) offered by the government was too low. As the debt was not thus distributed, the government adopted the plan of partial payments. From 1825 the redemption of the debt proceeded with great rapidity, so that by the close of 1834 the whole mass was practically extinguished. Small amounts of stock were still outstanding, but their payment was provided for. The duties of the commissioners of the sinking fund ceased, and the Secretary of the Treasury was charged with further payments on account of the debt.

This closes our chapter of experience with a permanent commission. Invented in an era of personal government, cabinet intrigue, and limited publicity, as a visible and imposing sign that the public faith was beyond the whim of a minister or the cavil of a creditor, it had no place or use in the system we developed. It was but a needless administrative appendix that, once imported, continued with us only by sufferance, and that a later debt epoch has not revived. With the modern budget and monthly debt statement, it needs no special board with separate accounts to enable the public to follow the course of amortization.

Debt Payment Between 1837 *and* 1862.

Between 1837 and 1862 lies a period of little fiscal interest, separating by a quarter of a century the

two great debt-paying epochs of our history. This period exhibits a series of fluctuations of expense, revenue and debt, too rapid to permit striking into any settled policy, such as prevailed during the eleven years after 1801 or the seventeen years following 1817.

After the crash of 1837 constant deficits led the government to issue treasury notes. Nothing was done for their redemption, so they were annually paid by new issues. At last these piled up till, in 1841, Congress was forced to fund them, and thus found a new public debt. As usual, the faith of the United States was pledged to the redemption of the new bonds. The next year the loan was extended and enlarged, and based in the old-fashioned way. So much of the import duties as should be necessary were pledged to pay the interest and redeem the stock. Under these acts $21,000,000 of funded debt were created.

When, in 1844, prosperity returned and a surplus appeared in the treasury, Secretary Bibb came forward with a plan for a sinking fund. From the midst of an extraordinary mass of platitudes, Bibb declares that excess of revenue above expenditure is the only real sinking fund, and that "the lessening of expense and the increase of revenue are the only means by which the sinking fund can be enlarged." After reviewing the history of our former debt payment, he suggests on annual appropriation of two millions for the debt service. At the same time, owing to the uncertain yield of the revenues, he favors the setting aside of casual surpluses rather than a fixed sum, and recommends the establishment of a sinking fund commission. The chief loans were to fall due in 1853 and 1863. The secretary, therefore, wants a sinking

fund adquate to pay the interest, "to purchase so much in each year of the principal, as shall be offered for sale at reasonable rates for certificates of stock, and to amount, in the succession of years which must elapse before they will be redeemable by the terms of contracts, to a sufficiency to pay the principal when the time for redemption shall arrive." The fault may lie in the syntax, but at first blush this sentence would seem to show that the secretary did not understand how uniform is the action of a combined sinking fund.

With the advent of the Mexican war came a new growth of debt. The loan act of 1847 authorized the issue of twenty-three millions of twenty-year stock. To the service of this loan were pledged the proceeds of all sales of public lands after January 1, 1848. The balance left after paying interest was to be used in buying bonds at their market value, if not above par. For purchase of the sixteen million loan of the next year the Secretary of the Treasury was authorized to use any surplus funds.

The excess from the sale of public lands set apart for reducing the stock of 1847, could not be used in buying stock above par. As the market price was above par, the funds had to lie idle in the treasury. Secretary Walker, therefore, sought and obtained authority to purchase at a premium. This was found, however, a dear way of sinking the debt. During 1851 and 1852 the average price paid for government bonds was 113, and the total sum expended in premiums was over $300,000. The Secretary of the Treasury accordingly suggested that, besides letting the surplus accumulate in the treasury, or buying stock with it at 113, there was still the third alternative of investing it in sound state securities, and

holding them as a sinking fund until the government could redeem its stock at par. Congress mindful of the fate of the Smithsonian fund declined to risk the public money in state bonds.

The Sinking Fund of 1862.

With the outbreak of the Civil war begins the final period of sinking fund history. In the earlier part of this period we find a return to Hamiltonian principles. Secretary Chase in his report of July 4, 1861, advocated the immediate establishment of a sinking fund for the expungement of the war loans. The fruit of his policy was the clause in the act of February 25, 1862.

This act, after authorizing a serious appeal to credit, undertook to establish the debt on a secure basis. The coin paid for duties on imports was to be applied, first, to the payment of interest on the bonds and notes of the United Stats. It was then to be applied "to the purchase or payment of one per centum of the entire debt . . . . to be made within each fiscal year, which is to be set apart as a sinking fund, and the interest of which shall in like manner be applied" . . . . The residue of customs receipts was to be paid into the treasury. The language of this act is plain. The provision was made part of a loan act and was to apply to future as well as to existing debt. In view of this, the words of a writer in the *Bankers' Magazine* seem warranted.

"It was a formal notice to all persons, who should loan to the government, of its future intention, and constitutes a contract as binding as any can be made between it and the persons who have loaned to the government since that date."[1]

[1] Vol. 40, p. 725.

Notwithstanding the law of 1862, there was no compliance with its sinking fund provision during the war. At the close Secretary McCulloh, who resembled Gallatin as Chase resembled Hamilton, ignored[1] the law of 1862 and proposed a sinking fund similar to that of 1817. He estimated that a yearly appropriation to the debt of $200,000,000 would discharge the whole in about thirty years. The proposal was not accepted, and during his adminstration the treasury applied to the debt whatever funds were available, without reference to the sinking fund. As the actual reduction was far greater than that required by law, nobody complained.

The sinking fund provision of 1862 seems to have been discovered by Secretary Boutwell. In his first report he announced that he had purchased twenty millions of bonds for the sinking fund. He had made further purchases, which he held as a special fund subject to the action of Congress. He recommended that such extra purchases be added to the sinking fund until it equalled what it would have been, if the law had been complied with from the first.

In the great funding act of July 14, 1870, reorganizing the public debt, it was provided that all bonds applied to the sinking fund be recorded, cancelled, and destroyed, and that a sum equal to the interest on all bonds belonging to the sinking fund, be included in the yearly amortization. Heretofore the heads of the treasury had bought bonds, even beyond the requirement of the sinking fund. This action was legalized by a clause authorizing the secretary to redeem the five-twenties with any coin which he might lawfully apply to that purpose.

[1] Report of 1865.

In 1873 the great crisis dried up the sources of revenue seriously and made it impossible to meet all claims upon the receipts. It is possible that, if Secretary Boutwell had been in office, there would have been a rigid adherence to the strict letter of the law of 1862. Under Secretary Bristow the law was practically construed to suit the emergency. It was announced that for 1874-5 there would be a surplus revenue of nine millions to be applied to the sinking fund. As under law over thirty-one millions was required for the fund, there would be a deficiency for the year of over twenty-two millions. This was making the sinking fund the residuary legatee of the revenues.

In his report for 1875 Secretary Bristow acknowledged that the sinking fund payment was secondary only to the interest on the public debt, and took precedence of all other appropriations. As some had asserted that the excess payments of former years excused the lapse of the sinking fund payment when need arose, the secretary took occasion to declare that the statute imposed a duty to be performed annually, and that purchases must be made within each fiscal year. The secretary explained the cessation of bond purchases by the fact that bonds could not be bought at par, while he was forbidden by law to pay more. This dead-lock, however, had been broken by the law of March 3, 1875, which authorized the secretary to obtain bonds for the sinking fund by calling in and redeeming the five-twenties.

As the deficiency in the revenues continued, the next secretary, Morrill, thought fit to present a view of the operations of the debt *in toto*. From his cal-

deficiency of another year? The senator regarded it as a compliance with the law when the government does substantially what it agreed to do. No man could question the faith of the United States because it was for three or four years unable from its current revenues to pay the sinking fund, provided it has, on the whole, more than made good its promise. But while the senator regarded the sinking fund payment as justly amenable to the financial demands of the country, he deemed it inconsistent with honor and public faith to alter or invade the sinking fund by law. Temporary exigency might suspend amortization without dishonor, but conscious policy never.

Conclusions.

Our conclusion, then, is that the debt has been reduced, but not with the steadiness and automatic regularity contemplated by the terms of the law of 1862. Though the total reduction has exceeded the requirements of the law, yet so sensitive have the yearly appropriations been to the condition of the treasury, that it is doubtful if they could have conformed more closely to the varying financial situation, had there been no law at all.

What the secretaries have done—and they could do no more—was simply to amortize with the annual surplus, be it large or small. It is hard to see, therefore, wherein our sinking fund law, thus administered, differs in effect from a law directing the secretary to use surplus funds to pay the debt. If Congress had ordered the law to be administered so that the sinking fund appropriation should enjoy a priority over other appropriations, not permanent, or

regular, the law would have meant something. In that case a shrinkage in the revenues would have meant a deficiency in the funds for public works, and not in the funds for the public debt. We should not then be placed in the anomalous position of granting to gratuitous appropriations like those of the river and harbor bill, the preference at the counters of the treasury over a matter of contract like the sinking fund appropriation.

It seems, then, from our last experience, that, however solemnly a sovereign state may confer upon the principal of the public debt the first lien upon the revenues, considerations of practical policy will lead that state to relegate the principal of the debt to the frontier of public obligation, there to be abandoned, should the national income for a time retreat within narrower bounds.

culations he concluded that the public creditor had no ground of complaint.

"The terms of the law of February 25, 1862, required that by the operations of the sinking fund account, the public debt should be reduced in the sum of $433,848,215,37 between July 1, 1862, and the close of the last fiscal year. A reduction has been effected during that period of $656,992,226.44, or $223,144,011.07 more than was absolutely required.

"It can therefore be said, as a matter of fact, that all of the pledges and obligations of the government to make provision for the sinking fund and the cancellation of the public debt have been fully met and carried out."[1]

Liberal Interpretation.

The sinking fund first rose into prominence during the preparations for specie resumption. The act of 1875 permitted the sale of bonds, to procure the stock of gold necessary for resumption. A compliance with the letter of the statutes would lead to the practice of redeeming and borrowing at the same time. Sound finance required that, in such a case, the government should cease buying bonds for the sinking fund, and let the cash destined for that purpose accumulate in the treasury, awaiting the day of resumption. It was accordingly urged, and with reason, that the claims of the sinking fund should be suspended.

This was not done, but something similar was done. The debt to which a yearly one per cent. payment was pledged included notes as well as bonds. It might, therefore, he held lawful to redeem green-

[1] Report of 1876.

backs, or even "shinplasters," for the sinking fund, in place of bonds, and thereby lesson the mass of paper to be confronted on January 1, 1879. Accordingly under the law or April 17, 1876, $7,000,000 of fractional currency were credited to the sinking fund at five per cent. interest. Similarly $8,000,000 of greenbacks were added under a clause in the resumption act.

Since the accession of Senator Sherman to the treasury portfolio a construction of the laws of 1862 has prevailed which, however consonant with common sense and sound finance, is irreconcilable with the theory that the sinking fund then established is part of the contract with the public creditors. In his report for 1879 the secretary said: "These acts (of 1862 and 1870) are regarded as imposing upon the secretary the duty of providing for the sinking fund out of the surplus revenues of the government." The new construction was very apparent in a Senate debate, in 1884, over a proposition to reduce the sinking fund. Senator Plumb regarded the sinking fund as merely a matter of bookkeeping. . . . "The sinking fund has simply been something represented by certain entries on the books of the treasury, but nothing in the vaults of the treasury."

Senator Sherman stated that, in 1873 and thereafter, the government did not pay one-fourth or one-fifth of the sinking fund. In 1877 and the following years, surpluses appeared and much more was paid than the sinking fund required. The question, then, is, Has the United States, which has pledged its faith to pay a certain sum annually, a right to apply the excess payment of one year to make up the

deficiency of another year? The senator regarded it as a compliance with the law when the government does substantially what it agreed to do. No man could question the faith of the United States because it was for three or four years unable from its current revenues to pay the sinking fund, provided it has, on the whole, more than made good its promise. But while the senator regarded the sinking fund payment as justly amenable to the financial demands of the country, he deemed it inconsistent with honor and public faith to alter or invade the sinking fund by law. Temporary exigency might suspend amortization without dishonor, but conscious policy never.

Conclusions.

Our conclusion, then, is that the debt has been reduced, but not with the steadiness and automatic regularity contemplated by the terms of the law of 1862. Though the total reduction has exceeded the requirements of the law, yet so sensitive have the yearly appropriations been to the condition of the treasury, that it is doubtful if they could have conformed more closely to the varying financial situation, had there been no law at all.

What the secretaries have done—and they could do no more—was simply to amortize with the annual surplus, be it large or small. It is hard to see, therefore, wherein our sinking fund law, thus administered, differs in effect from a law directing the secretary to use surplus funds to pay the debt. If Congress had ordered the law to be administered so that the sinking fund appropriation should enjoy a priority over other appropriations, not permanent, or

regular, the law would have meant something. In that case a shrinkage in the revenues would have meant a deficiency in the funds for public works, and not in the funds for the public debt. We should not then be placed in the anomalous position of granting to gratuitous appropriations like those of the river and harbor bill, the preference at the counters of the treasury over a matter of contract like the sinking fund appropriation.

It seems, then, from our last experience, that, however solemnly a sovereign state may confer upon the principal of the public debt the first lien upon the revenues, considerations of practical policy will lead that state to relegate the principal of the debt to the frontier of public obligation, there to be abandoned, should the national income for a time retreat within narrower bounds.

III.

The Theory of Amortization.

We are in a position, now that our historical survey has supplied us with a sufficient stock of precedents, to enter upon the theory of amortization, and to discover the relation of the various species of sinking fund to each other, and to their common function. Simple as the thing may seem after our comparative study, no financial task has so befooled statesmen and led to costly mistakes, as the sinking of public debt. In England, the pioneer in modern finance, the search for the best way of amortization has strained the powers, and taxed the ingenuity, of the best heads for over a century. And yet it has been demonstrated that England, during the Napoleonic wars, lost by her theory of amortization a sum greater than the debt left us by the Revolution. In fact, it is only within the last two decades that the practice of the great financial powers has approached such an unanimity, as encourages the student fearlessly to frame a theory of amortization.

Our Theory Concerned with Settled Policy.

The first thing to note is, that whatever theory there may be relates to the sinking of funded, consolidated, or permanent debt. The theoretical side of amortization is principally concerned with fixed policy; and floating debt, such as treasury notes, exchequer bills, *bons du tresor,* is not, and should not become the object of a permanent provision. Good financiering requires that a floating debt be either paid off or funded. We have, it is true, occasional redemption funds and the rather nondescript *caisse*

d'amortissement of Napoleon I, but their theoretical import is too slight to require treatment.

Similarly we are not concerned with any temporary. hand-to-mouth handling of a time debt. When legislation busies itself solely with the present, leaving policy free to be continually adjusted to circumstances, hindsight replaces foresight. It is in the remote consequences of a settled fiscal policy that the perplexing problems of the financier lie.

The Meaning of the term "Sinking Fund."

Our theory has to do with sinking funds. But it is proper to note that this word is ambiguous. The word "fund" was formerly used to designate a number of items of revenue grouped together and regularly devoted to a specific object. The "sinking fund" was that group of revenues regularly applied to the principal of the debt. The yearly yield of this group was the "annual sinking fund."

Now let this appropriation be conceived, not as applied directly to the debt, but as invested in active securities destined ultimately to redeem the debt. In that case this accumulation of securities might be regarded as, properly speaking, the sinking fund. And this, even if the securities invested in be the very bonds that the sinking fund is destined to pay off. By the hocus-pocus of legal fiction, the still active public securities acquired, may be, and actually were, regarded as the sinking fund for their own redemption.

It is plain that, with the abandonment of this system—in this country in 1817, and in England in 1829—the term "sinking fund" would tend to revert to its original sense. But meanwhile, the old

habit of devoting certain revenues to particular uses had been broken off. Hence, as there was no well-defined fund to which the word might attach, "sinking fund" would come to mean the system, policy, or enactment, under which money is regularly applied to the principal of a debt. And finally the word would frequently be used to describe the payment itself, i. e., the payment made in behalf of the principal of a debt under a general law. This is why the appropriation of the surplus of 1790 to the purchase of stock did not, strictly speaking, found a sinking fund at all. It was only in the clause permitting loans that any hint of continuous amortization appeared.

It is to be kept in mind that the discussion turns on the mode of applying money to the extinguishment of a debt. In our analysis we cannot ask whether the moneys applied come from taxation, or from new loans. The source of the appropriation, though of the highest practical importance, cannot furnish the ground of classification.

Bearing this in mind, it is proposed in the discussion to justify the following analysis:

- Amortization by
  - Regular appropriation
    - proportional
      - accumulating
      - simple
    - progressive
      - annuities
        - certain
        - life
        - premium bonds
      - combined fund
      - formal sinking fund
      - specific funds
    - fixed
      - specific income
      - fixed proportion
      - fixed sum
        - sinking fund appropriation
        - instalment.
  - Contingent appropriation
    - of intentional surplus
    - of casual surplus

Contingent Amortization.

As the simplest reduction of a debt takes place by casual appropriations, so the simplest sinking fund is the permanent appropriation of casual, budgetary surpluses. If these surpluses are really casual, there is no guarantee that they will more than cover, in the long run, the casual deficits. But if these latter were to be covered, not by casual surpluses of succeeding years, but by being given a place within the next budget, it is possible that such a sinking fund might really yield something. In these days of close estimates, however, it can not be depended upon for anything effective.

The second type of sinking fund is the permanent appropriation of intentional surpluses. This species is well illustrated in the English "Old Sinking Fund." In 1828, after a parliamentary commission had announced the bad results of Pitt's sinking fund, the reaction against inviolable appropriations was so strong that Parliament went to the extreme of laxity with the payment of the debt. Bitter experience had taught that a sinking fund should be suspended when the necessary revenue is not forthcoming. Pressing the argument further, it was concluded that, as it was impossible to escape an occasional deficit year, the whole system of regular amortization ought to be discarded. Parliament could escape all the dangers and secure all the benefits of a sinking fund simply by devoting any net surplus that might arise to the extinguishment of the debt. This was done, and Parliament contented itself with recommending that, in making up the budget, the Chancellor of the Exchequer plan for a surplus of at least three millions. As a result

of thus vacating responsibility, the surplus soon dwindled to as many hundred thousand, and the policy of debt extinction languished. Ministers of finance preached to willing ears the doctrine that it is better to "let money fructify in the pockets of the people," than to tax it out and thereby stop the interest on consols.

At the same time, the monied classes—who with clearer vision saw that taxation is, in fact, largely compulsory capitalization—strenuously opposed any rapid debt payment that would lessen their dividends by diluting the fund of national capital with a stream of state-collected earnings. As a result, one minister after another preferred to remit taxes, rather than incur the displeasure of the people and the hostility of the creditor interests. Between 1829 and 1869, the clear surplus applied to the British debt averaged—not £3,000,000, but £760,000.

Experience, hence, seems to show that any scheme of amortization, not backed by the utmost sanction of legislative enactment and the firmest pledging of national honor, is liable to quick collapse. To appriate to the national debt all the annual surpluses, and then to charge the ministry to see to it that there be a surplus, is to shift great responsibility to weak shoulders. To leave the matter of a surplus to the decision of a ministry is to put the policy of paying a debt at the most exposed point in goverment, subject to the continual and combined assaults of special interests and party clamor for the remission of taxes. Rarely, indeed, will the policy of high taxes, to pay a debt, be steadily supported by public opinion, at every moment and on every occasion. At the close of the Civil war, we declared we would pay off our

debt within a generation. It is true fulfillment has not lagged far behind promise, but it is doubtful whether our policy of rapid amortization would have been persevered in so well, if our debt had been paid with taxes as such. It is perhaps, the pleasing consciousness that our magical protective tariff has enabled us to saddle our debt on the foreign manufacturer, that has held us to the payment of nearly two billions.

Uniform Amortization.

The next type is the fixed sinking fund, by which the payment of debt is made the object of intra-budgetary provision. The difference between this type and the former is that, while the former is indirectly suspensible, the latter can be suspended only by positive enactment. The former sinking fund is practically suspended by any remission of taxes, or by extra heavy appropriations for other purposes. On the other hand, when the appropriation is regular and not contingent, it can be suspended only by overt act of the legislature, requiring with us the concurrence of the three legislative branches. This genus of sinking funds, then, has certain self-conserving properties that fit it for the nation that is in earnest in its amortization.

At the same time, it should be borne in mind that the regular appropriation introduced into the budget is of a peculiar nature. It is not to be ranked with other items of expense, so as to claim an equal right with them to be satisfied out of a temporary loan, in case of a deficit. For the sinking fund is peculiar in that it has a function that is annulled, in so far as money is borrowed for it. The function, for instance,

2. When the moral loss from any deviation from a settled financial policy would exceed the pecuniary cost of adhering to that policy.

This is simply saying that finance is politics, as well as science. But it is well to note here that the concessions science needs make to politics, depend much, in any concrete case, upon the kind of financial doctrine that statesmen have been preaching to the public and to its creditors. It was the unsound doctrine, instilled by Pitt into the minds of Englishmen in 1786, that made it bad politics to suspend the sinking fund in 1793 and thereafter.

Forms of Uniform Amortization.

The fixed appropriation sinking fund may be realized in three distinct forms. There may be periodically applied to the principal of the debt a fixed sum, a fixed proportion of the nominal capital of the debt, or the income from a specified scource.

The fixed sum, moreover, may be applied under the original terms of contract with creditors, or under subsequent enactment. In the first case, we have a debt made payable in instalments. This is one of the most objectionable methods of extinguishing a debt, seeing that, in case of an emergency, it forces upon the government the costly alternative of paying old debts with the proceeds of dear loans on the one hand, or of violating the public faith on the other. In the second case, we have the ordinary, old-fashioned redemption appropriation. As it is established subsequent to the contracting of the debt it redeems, the government is free, if it has not needlessly tied its own hands, to suspend the payment, whenever the public interest requires it.

The second form of fixed regular appropriation—the setting aside of a definite proportion, instead of a definite sum—is adopted when the total debt comprehended in the scheme of amortization is, as yet, uncertain. Once this is ascertained, the payment becomes definite, and operates uniformly on the debt till its extinction. This was the form of sinking fund maintained in Russia until 1860. Certain loans were to be amortized by annual payments of one, two, or two and one-half per cent, that is, in one hundred, fifty, or forty years.

The third form—the setting apart for the principal of the debt of all income from certain specified sources—is characteristic of new countries in the earlier stages of financiering, or of nations threatened with disaster to public credit. Formerly it was maintained in France and England, and we have seen how, step by step, the United States was forced into the same policy. It is still maintained in such countries as Austria, Hungary, Roumania, and Servia. It is a survival of the time when general national credit was unknown, and loans were raised by pledging specific funds to pay interest and principal. As the specific revenue sinking fund is characteristic of an inferior national credit and an undeveloped fiscal system, it is often incorporated into the act authorizing a loan, with a view to inspiring confidence in lenders. When thus established the sinking fund is inviolable, seeing that the specified revenues are not only appropriated, but even mortgaged beforehand, to the redemption of the debt. Moreover, as the interest of a loan should rest upon as sound a guarantee as does the principal, it is usual to pledge specific revenues to the general debt service,

both for interest and for principal. In this case, as we shall see, amortization becomes progressive.

The merits of the general type of sinking fund we have just been considering, over the contingent appropriation are, that it is really efficient, and that it may not be suspended without special action. But, nevertheless, the fixed sinking fund has a grave defect. The appropriation, as we have seen, is definite and constant. But as its action periodically extinguishes some part of the debt, and thus stops the interest thereon, it follows that the general interest charges must decline. The debt service, hence, becomes a troublesome variable in the budget, that calls for a perpetual tinkering of the revenue system and a continual re-adjustment of receipts to expenditures.

Besides this practical inconvenience, the fixed sinking fund puts the heaviest burden just at the beginning of amortization. So against this policy it might be urged :—

1. That the simplest justice demands that a public debt bear uniformly over a term of years.

2. That, as growth in population and wealth increases the financial power, a progressive debt charge would come nearer to securing a just equality of burden than a diminishing debt charge.

Progressive Amortization.

Now both these defects are, in a measure, remedied by converting the fixed sinking fund into a progressive sinking fund. The characteristic of this type is, that the total debt charge is kept constant, by causing each annual payment to take up the slack that

previous amortization has left in the interest charge. Each payment is made up of:

1. The original fixed payment.
2. The total annual interest released.

The progress, then, is not arbitrary, but perfectly systematic. It is not as if the government had decided to amortize $20,000,000 the first year, $21,000,000 the second year, $22,000,000 the third year, and so on. The growth is automatic depending upon:

a The amount of the fixed payment.

b The rate of interest of the debt amortized.

If we let these two factors be represented by x and y respectively, the progress of the amortization is indicated by the mathematical formulae for an annuity at compound interest.

End of 1st year........x
" " 2nd year.......$x + x\ (1 + y)$
" " 3rd year $x + \big(x + x\,(1 + y)\big)\ (1 + y)$....etc.

The type of progressive sinking fund assumes four forms, accordingly as it is the surplus of specific interest funds, is formal, is combined, or is distributed among annuities. As it is to this type that amortization tends to conform, and as its four forms are of great historical importance, it will repay a careful and detailed study.

The first form is the simplest and the earliest. We are to conceive of a debt bottomed on certain specified revenues yielding something more than the interest. Suppose, now, that any annual surplus these revenues may yield be applied to the payment of part of the debt. Part of the interest will thereby be stopped, and the surplus of the next year will be so much the larger. In principle, then, this surplus sinking fund

is truly progressive, although its regularity of growth is likely to be obscured by fluctuations in the annual revenue from the specified sources. This is the form of the first English sinking fund—that of 1716.

The formally progressive sinking fund, invented by Pitt and imitated by Hamilton, requires the creation of a special branch of administration, say a board of commissioners. To this board the treasury pays the annual sinking fund appropriation, which is straightway used to buy up, or redeem, government stock. Practically the stock thus acquired represents extinguished debt, and might properly be cancelled and destroyed. But it is not so regarded. The legal fiction is set up that the board is a creditor of the government, and that the stocks it holds are active obligations on which interest should still be paid. Accordingly the treasury pays over the accruing interest to the board, as it would to any large holder of government securities. No matter, therefore, how much debt has been amortized by the government, the nominal debt and the nominal interest charge remain the same. Until the last dollar is paid, and the board formally surrenders the stock to the treasury as defunct paper, the public debt is regarded as undiminished. The treasury pays every year, or every quarter, interest on stock wherever held, and also a fixed sum to the board. The board receives this sum together with the interest that comes to it as a holder of stock. These two items, then, make up the force of the sinking fund for that year, or that quarter. This total is invested in more stock. The next sinking fund payment is made up, not only of the two former items, but also of interest on the additional stock representing the previous investment.

Precisely the same results are reached in a much simpler way, by the second form of progressive sinking fund. I call it "combined," because the appropriation for the principal of the debt is not distinguished from that for the interest, but is combined with it under the head of "debt service," or under the misleading title of "sinking fund." By this method a fixed sum, larger than the interest charge alone, is applied annually to the debt, being divided between interest and principal. If we think of this sum as a line of a given length, the point of division between the two uses will each year be nearer the interest end than the year before. Though such a sinking fund may be managed by a special board, there exists no logical necessity for it as there does in the preceding case. This form of amortization seems to have been introduced by Gallatin in 1802.

From the combined sinking fund we easily reach that form hidden-away in terminable annuities. Instead of applying in lump to the debt till its extinction an annual fixed payment somewhat larger than the interest charge, suppose this payment subdivided, and applied equally to every minute portion of the debt operated on. Instead of barely paying the interest on one part of the debt and buying the rest outright, suppose we spread the combined fund evenly over the whole mass. We have then changed our terminable annual debt fund into a great many terminable annuities. In operation these are identical. A given annual appropriation will discharge a debt as soon one way, as the other. Is there, then, any practical difference? In fact, the practical difference is great, and it is just the oft-recurring difference between a policy under the control of gov-

ernment, and one not under its control. The ordinary combined sinking fund, if established subsequent to the debt it operates upon, is really a contract with no one, and can be suspended at need. Even if such a sinking fund is so incorporated into the loan bill, as to be part of the contract with the creditors, it is still under the control of government. The government has promised to amortize some part of the debt every year, but has not engaged to take up any particular bond or bonds. The contract is general in its nature and may be made to include future creditors.

But by throwing its annual payment into the form of terminable annuities, the government enters into a positive and specific engagement with the individual creditor. In the annuity the instalment on the principal is so bound up with the payment of the regular interest that a failure to pay the one is as serious as a failure to pay the other, and equally with it involves a confession of bankruptcy. A sinking fund in terminable annuities, then, is the most automatic and cast-iron of all modes of amortization. The loss it may entail was shown in the war of 1812, when the government borrowed money on stock at 65 or 70, in order to pay off the eight per cent. annuities into which Hamilton had converted the six per cent. stock. Distinct as it is, the automatic nature of the annuity sinking fund has not been generally recognized. Parliament in 1822, while utterly rejecting the principle of borrowing in order to pay debt, took occasion to reaffirm its confidence in the wisdom of terminable annuities.

Of like nature with terminable annuities, though so covert that it has apparently never been recognized,

is the sinking fund concealed in the interest paid on premium bonds. For, in truth, the difference is but this. The terminable annuity includes, besides the pure interest, a surplus sufficient in a term of years to pay back *all* that the government has borrowed. The yearly payment on the premium bond includes, besides the pure interest, a surplus sufficient in a term of years to pay back *some part* of what the government has borrowed. If a $100 bond be sold for $102, as it was in the loan of 1848, there are two dollars that the government does not pay back when the bond is due. Is this premium, then, never paid back at all? Assuredly. To sell the bond at a premium the government had to offer a rate of interest higher than normal, and this narrow yearly margin is the progressive sinking fund that during the term of the bond gradually pays the two dollars unaccounted for.

Proportional Amortization.

Leaving the progressive sinking fund we pass to the final type — the proportional sinking fund. In this type the yearly appropriation is a certain fixed percentage of the outstanding debt, whatever it may be. In the simple form of the proportional sinking fund, this would mean diminishing or regressive amortization — a policy without reason and without precedent. In the other form, exemplified in the sinking fund of February 25, 1862, the annual payment is increased by the interest on all bonds purchased. Hence, just as the progressive sinking fund is composed of two elements — the fixed annual payment and the released interest — so the proportional sinking fund of 1862 has been composed of two ele-

ments — the decreasing payment of one per cent. of all outstanding debt, and the released interest.

In the latter, one component diminishes while the other increases, and the question as to whether the regress of the one will prevail over the progress of the other, is decided by ascertaining the ratio of the rate of proportional payment to the rate of interest on the debt. This type of sinking fund, then, may be either regressive, progressive, or fixed. Indeed we can even imagine such a fund as, at first progressing, and then declining when successive refundings at lower rates of interest have checked the growth of the interest component. To this class belong the sinking funds of Belgium and the United States.

Variations from the Type.

After this survey of the various distinct species of sinking fund it remains to add that, in practice, two or more species are often united. Thus the yearly supply of the progressive sinking fund, besides the released interest, is sometimes a fixed sum, sometimes a certain group of revenues, sometimes both together. The budgetary surplus usually goes to the debt, either as a separate sinking fund, or as an eventual resource of the main fund. It has been no uncommon thing for a nation to have at the same time a whole group of sinking funds operating each on its own portion of the debt. This naturally results from the policy of creating a special sinking fund with each loan. Sometimes these sinking funds are of different kinds and represent antagonistic financial principles. Thus England, besides her five small special sinking funds, has the "Old Sinking Fund,"

the "New Sinking Fund," and the terminable annuities. The first marks the farthest recoil from the system of inviolable payment, while the third is the most rigid kind of amortization.

Tendency to uniform treatment of a public debt.

It is probable that, with certain exceptions to be noted later, all specialization, either of revenue, or of debt, is bound to disappear. If the treatment of public debt exhibits any pronounced change, it is in the direction of unity of administration. Formerly the national revenues were parcelled and assigned to particular uses. Now they are usually treated as an indiscriminate whole. Formerly the national debt existed in the form of various loans, each having its own interest fund and its own sinking fund. Now the debt is consolidated, based on the general credit and subjected throughout to the same policy of amortization. The tendency, hence, is toward unity and simplicity.

Suspension of Amortization.

A further point is to be noted in reference to inviolability. We have laid down the general rule that a sinking fund should be suspended in a time of borrowing. Indeed we can say that it should be suspended as soon as the need of a future resort to loans is first felt. This is not to say, however, that cash for amortization is to be left to lie idle in the treasury in anticipation of a remote deficit. There is always some point, at which the gain by stopping current interest will outweigh the ultimate loss by procuring money with new bonds.

Now it is possible to suspend a regular sinking fund, in whole or in part, indirectly, without the formality and publicity of a legislative enactment. Thus, into the act establishing Pitt's sinking fund Fox introduced a clause permitting the commission to use their funds in buying new stock directly of the government, instead of buying on the market. Part of the French sinking fund of 1833 could be expended, only when five per cents were below par. As this never happened, the government was able to borrow this part from the sinking fund by giving certificates in acknowledgment. The Walpole sinking fund was practically confiscated by being charged with the interest on new loans. Gallatin's sinking fund was quickly tied up, in 1812–15, by being charged with the payment of short loans in the form of treasury notes. By these methods, the simplest sinking fund may be practically suspended without direct enactment.

What is the Best Mode of Amortization?

In selecting a mode of amortization, the financier should ask himself whether it is desirable that the debt should weigh most heavily during the early years of sinking, or should bear evenly over the whole period. If, as is likely, the latter is preferable, then he should choose some form of the progressive sinking fund. Of the four species, the specific revenue debt fund seems the most appropriate, when a loan has been incurred on behalf of a productive enterprise. When money has been borrowed for the building of railways, or the purchase of telegraphs, there seems to be a peculiar propriety in setting aside the earnings for payment of interest and reim-

burgement of the principal. By this kind of limited liability, that requires that each business that comes into the hands of the government should pay for itself, the people are secured against certain odious forms of patronage and favoritism. But apart from productive loans, the appropriation of specific revenues for a debt is clumsy and antiquated.

The second species — the formally progressive sinking fund—has been the subject of frenetic diatribe by second-rate writers for half a century. It has been stigmatized as the "compound-interest sinking fund," as if every species of progressive amortization did not involve growth at compound interest. As formerly it aroused baseless hopes, so later it aroused baseless fears. Of it Gibbon says: "Every dollar in its keeping yields less interest than in private bonds . . ." In fact, the sinking fund has no dollars in its keeping. He goes on: "On the theory of its advocates, the first step required to give it efficacy is to increase the taxation to something more than the interest on the debt, and this is to be carried on from year to year, and, with every other addition, invested in some productive securities. It is not to be presumed that any other securities than those of the government would be selected for such treatment, and these must be purchased at the market rate. The farce is too transparent to need further exposure. It resolves itself into borrowing money to pay borrowed money, and increasing the debt by the amount of expenses incurred for the transaction of the business."[1]

The way in which this passage associates the formally progressive sinking fund with borrowing

[1] Gibbon, "United States Debt.", pp. 119-121.

shows a complete misapprehension of its nature. In truth the Pitt-Hamilton sinking fund is simply a complicated and round-about way of amortizing with a constant debt charge. Though no more inviolable than other sinking funds, it is more liable to confuse the popular mind, partly by its want of simplicity and clearness, partly by introducing the fiction that government paper is productive property. Because it has peculiar dangers and no peculiar merits, it has been generally discarded.

Terminable annuities, as we have seen, involve obligatory amortization. It would, therefore, be folly to provide by means of them for the amortization of an entire national debt. In conclusion, then, we are forced to recognize in the combined sinking fund of Gallatin the best method of amortization yet discovered. The example of England and other nations enforces the conclusion of our theoretical discussion, that finds in this American contribution to practical finance the simplest, clearest, and most effective mode of reducing public debts that has so far been employed.

The Reciprocity Treaty with Canada of 1854.

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BY

FREDERICK E. HAYNES, PH. D.

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TABLE OF CONTENTS.

	PAGE.
ARTICLES OF THE RECIPROCITY TREATY	7
HISTORY OF THE TREATY	9
THE WORKING OF THE TREATY	30
APPENDIX: TRADE STATISTICS	59

The Reciprocity Treaty with Canada of 1854.

The treaty concluded between the United States and Great Britain on June 5, 1854, was designed to regulate the commercial relations between the United States and the British possessions in North America. It was negotiated at Washington by William L. Marcy, Secretary of State of the United States, and by the Earl of Elgin and Kincardine, Governor-General of the North American provinces, acting for their respective governments.

The treaty consisted of seven articles, of which the first two related to the fisheries, the third to reciprocal trade, the fourth to the navigation of the St. Lawrence, the fifth to the duration and abrogation of the treaty, the sixth to the extension of the provisions of the treaty to Newfoundland, if that colony indicated a desire for such extension, and the last article to the ratification of the treaty.

The third and fourth articles, to the discussion of which I intend to devote this paper, are as follows:

ART. III. It is agreed that the articles enumerated in the schedule hereunto annexed, being the growth and produce of the aforesaid British colonies, or of the United States, shall be admitted into each country respectively free of duty.

SCHEDULE.

Grain, flour and breadstuffs of all kinds.
Animals of all kinds.
Fresh, smoked and salted meats.
Cotton-wool, seeds and vegetables.

Undried fruits, dried fruits.
Fish of all kinds.
Products of fish and all other creatures living in the water.
Poultry, eggs.
Hides, furs, skins, or tails, undressed.
Stone or marble, in its crude or unwrought state.
Slate.
Butter, cheese and tallow.
Lard, horns, manures.
Ores of metals of all kinds.
Coal.
Pitch, tar, turpentine, ashes.
Timber and lumber of all kinds, round, hewed and sawed, unmanufactured in whole or in part.
Firewood.
Plants, shrubs and trees.
Pelts, wool.
Fish-oil.
Rice, broom-corn and bark.
Gypsum, ground or unground.
Hewn or wrought or unwrought burrs or grindstones.
Dyestuffs.
Flax, hemp and tow, unmanufactured; unmanufactured tobacco.
Rags.

Art. IV. It is agreed that the citizens and inhabitants of the United States shall have the right to navigate the river St. Lawrence and the canals of Canada, used as the means of communication between the great lakes and the Atlantic ocean, with their vessels, boats and crafts, as fully and freely as the subjects of Her Brittanic Majesty, subject only to the same tolls and other assessments as now are, or may hereafter be, exacted of Her Majesty's said subjects; it being understood, however, that the British government retains the right of suspending this privilege on giving due notice thereof to the government of the United States.

It is further agreed that if at any time the British government should exercise the said reserved right, the government of the United States shall have the right of suspending, if it thinks fit, the operation of Article III of the present treaty, in so far as the province of Canada is affected thereby, for so long as the suspension of the free navigation of the river St. Lawrence or the canals may continue.

It is further agreed that British subjects shall have the right freely to navigate Lake Michigan with their vessels, boats and crafts so long as the privilege of navigating the river St. Law-

rence, secured to American citizens by the above clause of the present article shall continue; and the government of the United States further engages to urge upon the state governments to secure to the subjects of Her Brittanic Majesty the use of the several state canals on terms of equality with the inhabitants of the United States.

And it is further agreed that no export duty, or other duty, shall be levied on lumber or timber of any kind cut on that portion of the American territory in the state of Maine, watered by the river St. John and its tributaries, and floated down that river to the sea, when the same is shipped to the United States from the province of New Brunswick.[1]

History of the Treaty.

Previously to 1845 the trade between the United States and British provinces was burdened with a system of differential duties which discriminated against foreign importations into Canada in favor of British to such an extent as to prevent any extensive trade.

In 1845 the British government changed its commercial policy by authorizing the Canadian legislature to regulate its own tariff. In 1847 the Canadian legislature removed the existing differential duties, and admitted American goods on the same terms as those imported from Great Britain.

This change of policy seems to have been the result of two causes; (1) of that change of policy in England which manifested itself in the abolition of the Corn laws in 1846, and in the repeal of the Navigation laws in 1849; and (2) of local causes in Canada. The Canadian rebellion of 1838-39 was the result of the long continued hostility between the English in Upper Canada and the French in Lower Canada.

[1] "Treaties and Conventions of the United States." pp. 448-453.

The attempt of Pitt in 1791 to settle the dispute by dividing Canada into two provinces had failed. The long pent-up feeling broke out in open rebellion in both the provinces. To pacify the people the British government decided to reunite the two provinces and give to the consolidated province a responsible government in accordance with the recommendation of Lord Durham's report of 1839. This was done in 1840.

The constitutional grievances were, however, not the only ones. The people of Canada saw, with increasing discontent, the rapid strides of the United States in wealth. They longed to share in that progress, and hence the desire of annexation began to be felt. Lord Elgin, the governor-general from 1847-1854, recognized the conditions, and through his efforts the Reciprocity Treaty of 1854 was negotiated, giving to the people some of the advantages possessed by their more fortunate and richer neighbors.

In March, 1849, Lord Elgin called Lord Grey's attention to the subject:

"There has been," he writes, "a vast deal of talk about 'annexation,' as is unfortunately always the case here when there is anything to agitate the public mind. . . . A great deal of this talk is, however, bravado, and a great deal the mere product of thoughtlessness. Undoubtedly it is in some quarters the utterance of very serious conviction; and if England will not make the sacrifices which are absolutely necessary to put the colonists here in as good a position commercially as the citizens of the States—in order to which *free navigation* and *reciprocal trade with the states are indispensable*—if not only the organs of the league, but those of the government, and of the Peel party, are always writing as if it were an admitted fact that colonies, and more especially Canada, are a burden, to be endured only because they cannot be got rid of, the end may be nearer than we wot of."[1]

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[1] "Letters and Journals of Lord Elgin." Edited by T. Walrond. London, 1872. pp. 100, 102 and 104.

Again, in November of the same year, he writes:

"But if things remain on their present footing in this respect, there is nothing before us but violent agitation, ending in convulsion or annexation. . . . And I much fear that no measure but the establishment of reciprocal trade between Canada and the States, or the imposition of a duty on the produce of the States when imported into England, will remove it."[1]

Such being the state of feeling in Canada in regard to matters of trade, the address[2] of the Parliament to the Queen, praying that the prospective changes in the laws regulating the admission of foreign grain into the British markets might be made with some reference to their needs, came as a natural consequence. This address also contained a specific request for the opening of negotiations with the United States for the admission of the products of either country into the ports of the other upon equal terms. This address, made on May 12, 1846, received a favorable answer on June 3, 1846, and thus became the first direct step in the negotiation of the reciprocity treaty.

Accordingly, in December, 1846, the British minister, Mr. Pakenham, acting under instructions, communicated with the Secretary of the Treasury, Robert J. Walker, upon the subject. The United States government proved to be favorably disposed to the proposition for freer trade with Canada, and upon consultation it was decided to proceed by means of concurrent legislation by the United States and Canada. Steps were therefore taken for the completion of this plan.

[1] "Letters and Journals of Lord Elgin." Edited by T. Walrond. London, 1872. pp. 100, 102 and 104.

[2] "House Executive Documents." First Session Thirty-first Congress. Vol. VIII, No. 64, p. 2. 1849-50.

In 1847 the Canadian Parliament, immediately availing itself of the power conferred upon it by the Imperial government, to regulate duties on the products both of foreign countries and of the mother country, the duties on American manufactures were lowered from 12½ to 7½ per cent., and those on British manufactures were raised from 5 to 7½, thus placing the United States on an equality with the mother country.[1]

The memorandum of the Hon. W. H. Merritt, submitted to the United States in the summer of 1849, contains a copy of an act of the Canadian Parliament "to provide for the free admission of certain articles of the growth or production of the United States of America into Canada, whenever similar articles, the growth and production of Canada, shall be admitted without duty into the said States."[2]

In 1848 a bill was drawn up by the committee on commerce of the House of Representatives, and strongly recommended by the Secretary of the Treasury. This bill passed the House without opposition in 1848, but failed to receive the attention of the Senate on account of the pressure of other business. At the next session it again failed to be acted upon by the Senate for the same reason.[3]

In January, 1850, a similar bill was reported by the committee on commerce, and recommitted "with a view to provide therein for the free navigation of the river St. Lawrence, and to assimilate the same to the bill now pending before the Senate of the like

[1] "House Executive Documents." First Session Thirty-first Congress. Vol. VIII, No. 64, pp. 3–4.

[2] Same, p. 14.

[3] "House Executive Documents." First Session Thirty-first Congress. Vol. VIII, No. 64, p. 3.

character." The committee on commerce, through its chairman, Robert M. McLane, requested the Secretary of State to inform it upon the subject of the navigation of the St. Lawrence. Secretary Clayton, after communication with the British minister, informed the committee of the readiness of the British government to concede the navigation by treaty.[1] The introduction of this new feature seems to have caused the first consideration of a treaty in reference to the pending negotiations.

Finally at the next session the subject was taken up again as a matter of legislation by the introduction in the House of a bill for reciprocity of trade between the United States and Canada and for the free navigation by American vessels of the canals and waters of Canada. Late in the session the matter was debated, and an amendment suggested, which provided for the importation of American manufactures into Canada at the same rates as those at which British manufactures were imported.[2]

After 1851 no serious attempt was made to obtain reciprocal trade by means of concurrent legislation. There were probably two principal reasons for this neglect, (1) the disturbed political condition of the times, and (2) the situation in regard to the northeastern fisheries, arising from differences in interpretation of the convention of 1818.

The beginning of the negotiations in regard to reciprocity had arisen from the discontent in Canada, but the introduction of the question of the fisheries

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[1] *Congressional Globe.* First Session Thirty-first Congress. Part II, page 1009. 1849–50.

[2] *Congressional Globe.* Second Session Thirty-first Congress. Vol. XXIII, p. 22, 150–51. 1850–51.

interested the maritime provinces exclusively. In this way the negotiation became extended so as to include all the British possessions in North America. It is probable, however, that without the existence of the fishery problem, the maritime provinces would have been included in any reciprocity measure, for in 1849 the British chargé d'affaires, writing to the Secretary of State, says that he has lately received an instruction directing him, with the concurrence of the lieutenant governor of New Brunswick, to negotiate for the extension of reciprocity to that province upon the same conditions for which it may be conceded to Canada.[1]

Just at the end of the session of Congress in 1853, Mr. Breckinridge moved for the suspension of the rules for the introduction of the resolution requesting the President "to arrange by treaty the questions connected with the fisheries on the coasts of British North America, the free navigation of the St. Lawrence and St. John, the export duty on American lumber in the province of New Brunswick, and reciprocal trade with the British North American colonies on the principles of liberal commercial intercourse."

Finally the English government determined to send the Earl of Elgin, then governor-general of Canada, to Washington. The party on leaving England consisted only of Lord Elgin, Mr. Francis Hincks, then prime minister of Canada, Captain Hamilton, A. D. C., and Lawrence Oliphant, private secretary of Lord Elgin; but at New York it was joined by Colonel

[1] "House Executive Documents." First Session Thirty-first Congress. Vol. VIII, No. 64, p. 4. 1849-50.

Bruce and one or two Canadians, whose advice and assistance upon commercial questions were needed.[1]

Upon arriving at Washington Lord Elgin announced the object of his visit to President Pierce and the Secretary of State, Mr. Marcy, who told him that it was entirely hopeless to expect that such a treaty as he proposed could be carried through with the opposition which existed to it on the part of the Democrats, who had a majority in the Senate. They assured him, however, that if he could overcome this opposition he would find no difficulty with the executive branch of the government. With this object in view, the conversion of the Democratic majority in the Senate, "Lord Elgin and his staff approached the representatives of the American nation with all the legitimate wiles of accomplished and astute diplomacy. They threw themselves into the society of Washington with the abandon and enjoyment of a group of visitors solely intent on pleasure." "At last, after several days of uninterrupted festivity," writes Oliphant, "I began to perceive what we were driving at. To make quite sure, I said one day to my chief, 'I find all my most intimate friends are Democratic Senators.' 'So do I,' he replied drily."[2]

In a letter written at the time Oliphant describes more minutely the methods used by Lord Elgin in his personal intercourse with those whom he wished to bring over to his side: "Lord Elgin pretends to drink immensely, but I watched him, and I don't believe he drank a glass between two and twelve.

[1]These gentlemen were intended to act as delegates from the different provinces to advise in regard to matters concerning them. "Reminiscences of Sir Francis Hincks." pp. 234 and 315.

[2]"Episodes in a Life of Adventure." Lawrence Oliphant. 1887. p. 40.

He is the most thorough diplomat possible,—never loses sight for a moment of his object, and while he is chaffing Yankees and slapping them on the back, he is systematically pursuing that object. The consequence is, he is the most popular Englishman that ever visited the United States."[1]

At last, after about ten days of social activity, Lord Elgin informed Mr. Marcy that if the government was prepared to adhere to its promises to conclude a reciprocity treaty with Canada, he could assure the President that a majority of the Senate would be found favorable to it. "Mr. Marcy," says Oliphant, "could scarcely believe his ears, and was so much taken aback that I somewhat doubted the desire to make the treaty, which he so strongly expressed on the occasion of Lord Elgin's first interview with him, when he also pronounced it hopeless."[2] The next three days were occupied with the arrangement of the details of the treaty, which had to be hurried through, as Lord Elgin was due at the seat of his government.[3]

"We are tremendously triumphant; we have signed a stunning treaty. When I say we, it was in the dead of night, in the last five minutes of the fifth of June, and the first five minutes of the sixth day of the month aforesaid, that in a spacious chamber, by the brilliant light of six wax candles and an Argand, four individuals might have been observed seated, their faces expressive of deep and earnest thought not unmixed with cunning. Their feelings, however, to the acute observer, manifested themselves in different ways; and

[1]"Life of Lawrence Oliphant," by Mrs. M. O. W. Oliphant. 1891. p. 120.

[2]"Episodes in a Life of Adventure." pp. 43–44.

[3]The principal cause of the failure of former negotiations arose from the refusal of the British government to treat, unless the coal of New Brunswick and Nova Scotia were included in the free list. "Reminiscences of His Public Life," by Sir Francis Hincks. p. 233. Montreal. 1884.

this was but natural, as two were young and two aged,—one, indeed, far gone in years, the other prematurely so. He it is whose measured tones alone break the solemn silence of midnight, except when one of the younger auditors, who are intently poring over voluminous MSS., interrupts him to interpolate 'and' or scratch out 'the.' They are, in fact, checking him, and the aged man listens while he picks his teeth with a pair of scissors, or clears out the wick of the candles with their points and wipes them on his hair. He may occasionally be observed to wink, either from conscious 'cuteness or unconscious drowsiness. Attached to these three MSS. by red ribbons are the heavy seals. Presently the clock strikes twelve, and there is a doubt whether to date it to-day or yesterday. For a moment there is a solemn silence, and he who was reading takes the pen, which has previously been impressively dipped in the ink by the most intelligent of the young men, who appears to be his secretary, and who keeps his eyes wearily upon the other young man, who is the opposition secretary, and interesting as a specimen of a Yankee in that capacity. There is something strongly mysterious in the scratching of that midnight pen, for it is scratching away the destinies of nations; and then it is placed in the hands of the venerable file, whose hand does not shake, though he is very old, and knows he will be bullied to death by half the members of Congress. The hand that has used a revolver upon previous occasions does not waver with a pen, though the lines he traces may be an involver of a revolver again. He is now the Secretary of State; before that, a general in the army; before that, governor of a state; before that Secretary of War; before that, minister to Mexico; before that, a member of the House of Representatives; before that an adventurer; before that a cabinet-maker. So why should the old man fear? Has he not survived the changes and chances of more different sorts of lives than any other man? and is he afraid of being done by an English lord? So he gives us his blessing, and we leave the old man and his secretary with our treaty in our pockets."[1]

In this rather grandiloquent style Oliphant described the signing of the treaty in a letter written to his mother upon June 7, 1854.

Doubts have been expressed as to the means employed in the negotiation of the treaty. Enemies of Lord Elgin at home and in the provinces said that it

[1] "Memoir of the Life of Lawrence Oliphant, and Alice Oliphant, his Wife," by Margaret O. W. Oliphant. Vol. I, pp. 130–132.

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was bought with British gold. American opponents of the treaty declared that it was "floated through on champagne." While there is no reason to believe that open bribery was used, there does appear to be ample evidence that the second charge was well founded, and Lord Elgin's secretary does not hesitate to admit its substantial truth, for he says in his account of the negotiations that "without altogether admitting this, there can be no doubt that in the hands of a skillful diplomatist that liquor is not without its value."[1]

Although the means used in the negotiation of the treaty were not such as to reflect credit upon those engaged in them, the preceding attempts to obtain reciprocal trade privileges show that it had a substantial movement behind it and was not merely "floated through on champagne." An act to carry the treaty into effect was passed by Congress and approved by the President, August 5, 1854. This act (Thirty-third Congress, First Session, Chapter 259, 1854), provided that—

"Whenever the President of the United States shall receive satisfactory evidence that the Imperial Parliament of Great Britain and the Provincial Parliaments of Canada, New Brunswick, Nova Scotia and Prince Edward's Island have passed laws on their part to give full effect to the provisions of the treaty between the United States and Great Britain, ... he is hereby authorized to issue his proclamation declaring that he has such evidence, and thereupon, from the date of such proclamation," the provisions of the treaty should take effect.[2]

The President issued his proclamation March 16, 1855.[3]

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[1] "Life of Oliphant," p. 109. "Episodes in a Life of Adventure," p. 38.

[2] "Statutes at Large," Vol. X, pp. 587-88, 1851-55.

[3] "Statutes at Large," Vol. 10, p. 1179. Acts to carry into effect the treaty were passed by Canada, September 23, 1854; Prince Edward

For the first few years the treaty seems to have been popular. The condition of the country remained prosperous. In 1857, however, came the great crisis of that year, and before the country had fairly recovered from the effects of that disturbance, the slavery question had reached such a stage that war alone could settle it. The "irrepressible conflict" came and the reciprocity treaty was doomed. As we shall see later, the treaty was far from satisfactory, even to its friends, looking at it from a purely economic point of view. But it would never have been abrogated on account of its defects, for those could have been remedied by negotiation. It fell a victim "to the anger which the behavior of a party in England had excited in America."[1] Moreover, there were the inevitable commercial disturbances of a time of war.

One slight attempt was made in 1858 to extend reciprocity; but it failed. The first proposition, made May 18, proposed to place certain products upon a footing with the articles exempted from duty under the reciprocity treaty of 1854. The second proposition was in the form of a joint resolution authorizing the President, "whenever he shall receive satisfactory information that hay and hops, being the products of the United Sates, and exported thence to any of the British North American provinces, are admitted

Island. October 7, 1854; New Brunswick, November 3, 1854; Nova Scotia, December 13, 1854; and Newfoundland, July 7, 1855. "British and Foreign State Papers," 1854–55, Vol. XLV, pp. 878–884. The treaty passed the Colonial legislatures with a total of only 21 dissentient votes. "Episodes in a Life of Adventure," Oliphant, pp. 52–53. The principal opposition came from Nova Scotia, and was due to the fisheries clauses. "Hinck's Reminiscences," pp. 233–36.

[1] "Canada and the Canadian Question." Goldwin Smith, p. 141.

free of duty, to issue his proclamation declaring hay and hops, the products of those provinces, shall be admitted free of duty."[1]

In March, 1860, the House passed a resolution requesting the President to give it all the information in his possession relative to the working of the treaty. Particular information was requested as to "Whether the provincial government of Canada has not, through its legislature, violated the spirit of said treaty; what has been the practical effect of the third clause upon the interests of the respective countries; what measures, if any, have been taken to procure correct information touching the practical operation and effect of the third article upon the interests of the American citizens, and whether, in his opinion, the third article could not, with advantage to Amercan interests, be either amended or rescinded.[2]

From this time on until the final abrogation of the treaty, it remained a frequent subject of controversy between the friends and opponents of the reciprocity policy. Elaborate reports were made from time to time by the committee on commerce of the House. Of these reports the most exhaustive was that prepared by Elijah Ward, of New York, for the committee on commerce, and presented to the House on February 5, 1862.[3] This report states in a clear and thorough manner the position of the friends of the treaty. Mr. Ward, while criticising many of the features of the treaty, and especially referring to the

[1] *Congressional Globe*, First Session, Thirty-fifth Congress, pp. 2212 and 3016. Part III.

[2] *Congressional Globe*, First Session, Thirty-sixth Congress, p. 1357. Part II.

[3] "House Reports of Committee," Second Session, Thirty-seventh Congress, 1861–2. Vol. III, No. 22.

hostile policy of Canada in discriminating against American vessels using its canals under the provision for free navigation, believed in the general soundness of the policy of reciprocity, and advocated a revision of the treaty.

In reply to this report the Canadian minister of finance made a defense of the policy of his province. The report took up in detail the several causes of dissatisfaction mentioned by the Americans.[1]

Besides the report of 1862 and the Canadian reply, there was a brief report made in April, 1864, from the committee on commerce. This also was the work of Mr. Ward, and really formed a supplement to his report of 1862. It formed the basis of the final struggle in the House over the abrogation of the treaty. The final paragraph recommended—

"That the President be authorized to give notice to the government of Great Britain that it is the intention of the government of the United States to terminate the reciprocity treaty made with Great Britain for the British North American provinces, ... unless a new convention shall be concluded between the two governments, by which the provisions shall be abrogated or so modified as to be mutually satisfactory to both governments; and that the President be also authorized to appoint three commissioners, by and with the advice and consent of the Senate, for the revision of the treaty, and to confer with other commissioners duly authorized therefor, whenever it shall appear to be the wish of the government of Great Britain to negotiate a new treaty between the two governments and the people of both countries, based upon true principles of reciprocity, and for the removal of existing difficulties."[2]

The report was accompanied by a joint resolution[3] embodying the substance of the recommendations of the committee on commerce. This joint resolution

[1] "Report of Minister of Finance upon the Report of Committee of Commerce of House of Representatives." March, 1862.

[2] "Reports of Committees." First Session Thirty-eighth Congress, 1863–4, Vol. I, No. 39.

[3] *Congressional Globe*, First Session, Thirty-eighth Congress, 1863–4, p. 1387.

was the subject of the debate in the House upon the abrogation of the treaty on May 18–19 and May 24–26. In this debate Mr. Ward acted as the leader of the friends of the treaty, making two able speeches in its favor, at the opening and closing of the debate respectively. He was supported by Isaac N. Arnold of Illinois, Thomas D. Eliot of Massachusetts, John V. L. Pruyn and Thomas T. Davis of New York, Rufus P. Spaulding of Ohio, J. C. Allen of Illinois, and L. D. M. Sweat of Maine. Justin S. Morrill of Vermont led the opposition, assisted by Frederick A. Pike of Maine, Francis W. Kellogg of Michigan, and Portus Baxter of Vermont. The merits of the debate were certainly with the friends of the treaty, for the opposition contented itself with denunciation of the treaty, and with invectives against the unfriendly policy of Great Britain.

Mr. Arnold, of Illinois, offered an amendment to the resolution proposed by the committee on commerce. This amendment authorized the President to use his discretion in abrogating the treaty in case of a failure in the negotiation of a revised treaty satisfactory to both governments.[1] Mr. Morrill of Vermont proposed an amendment in the nature of a substitute for the resolution of the committee on commerce. This provided for an unconditional abrogation of the treaty.[2]

On May 26, 1864, the House voted upon the three propositions before it. Mr. Arnold's amendment was defeated by a vote of 54 to 97. Mr. Morrill's substitute met the same fate by a vote of 74 to 82. The

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[1] *Congressional Globe*, First Session, Thirty-eighth Congress, 1863–4, p. 2455.

[2] Same, p. 2364.

original resolution of the committee was finally postponed to the second Tuesday in December by a vote of 77 to 72, after having been read a third time. A motion to lay the resolution on the table failed by a vote of 73 to 76.[1]

On December 13, 1864, the House took up the joint resolution and passed it by a vote of 85 to 57, forty members not voting. A good deal of party manœuvering preceded the final vote, the opposition led by Mr. Morrill attempting to substitute a resolution for unconditional abrogation.

The second great debate upon the resolution occurred in the Senate in January, 1865.

On December 14, 1864, the Senate received the resolution from the House and referred it, after a short debate, to the committee on foreign relations. Senator Grimes of Iowa moved that the resolution be referred to the committee on commerce, as "it refers to commercial relations existing between this country and the provinces of Great Britain." In reply Senator Sumner said that "every question of commerce between the two countries, even if it is the subject of negotiation, must be referred to the committee on commerce, and you may as well dismiss your committee on foreign relations." Finally the resolution was referred to the committee on foreign affairs.[2]

This action of the Senate indicates the way in which the measure was to be considered. Instead of treating the matter as one of commercial relations, the Senate proceeded to act upon it as a political measure.

[1] House debate, *Congressional Globe*, First Session, Thirty-eighth Congress, Part III, May 18, 2333–38; May 19, 2364–71; May 24, 2452–56; May 25, 2476–84; May 26, 2502–09.

[2] *Congressional Globe*, Second Session, Thirty-eighth Congress, 1864–65, p. 35.

As I have already said, this was the attitude of the opponents of the treaty throughout the whole discussion.

The committee on foreign relations, through Mr. Sumner, reported an amendment to the original resolution, providing for the unconditional abrogation of the treaty.[1]

The debate upon the amendment lasted through the two days, January 11–12, 1865, and ended with the passage of the measure on the latter day by a vote of 33 to 8.

The debate was long and thorough. The opposition excelled in the brilliancy of its speakers. Charles Sumner, John Sherman, Jacob Collamer and Solomon Foot of Vermont, Zachariah Chandler of Michigan, James R. Doolittle of Wisconsin, Nathan A. Farwell of Maine, and John Conness of California, spoke for the abrogation. John P. Hale of New Hampshire, Alexander Ramsey of Minnesota, Timothy O. Howe of Wisconsin, and Thomas A. Hendricks of Indiana opposed the abrogation.

The prestige of distinguished services was certainly with the opposition, but the strength of solid argument rested with the friends of the treaty. Said Senator John P. Hale, in concluding his speech[2] in favor of a revision of the treaty:

"If the treaty is imperfect and needs amendment, that [the proposed amendment for revision] is the true, statesmanlike, Christian way of annulling it. . . . But if, on the other hand, smarting as we now are under what we believe and feel to be injustice on the part of these colonies, we resort to this legislation at this time, in this hour, under such impulses, it will tend to increase and intensify all the

[1] *Congressional Globe*, Second Session, Thirty-eighth Congress, pp. 71 and 95–97.

[2] *Congressional Globe*, Second Session, Thirty-eighth Congress, 1864–65. Part I. pp. 204–06.

bad feelings that have unhappily existed; will, in fact, retard, if not render utterly impossible any future progress in the line of reciprocity between these two countries."

A brief quotation from the speech of an opponent will indicate the spirit with which the treaty was attacked. Said Senator Jacob Collamer of Vermont:

"I acknowledge that I have some prejudice against this treaty. I am a little situated as my old neighbor Judge Chipman was when he was called upon to testify whether a certain witness was a man of truth. He said he was not. He was then asked, 'Sir, are you not conscious that you labor under a prejudice against that man?' He answered, 'I think it likely that I am, I have detected him stealing two or three times.'"[1]

Justice to the opponents of the treaty requires it to be said that the quotation just cited is an extreme example of the opinions of that party. The address of the late Hannibal Hamlin before the commercial convention at Detroit, in July, 1865, indicates the opinions of the more moderate opponents of the treaty. He said:

"I was educated in the school of free trade,—not free trade in slices. I affirm that that is the most obnoxious system of legislation that can be devised by man. I am for free trade. . . . . But what do I mean by free trade? Not that system which selects a few articles and makes them entirely free, rendering it necessary that you shall impose additional revenue upon other articles in order to make up for the deficiency. That is free trade in slices, and it cannot be defended upon any principle of political economy ever enunciated by any man."[2]

On January 16, 1865, the House concurred in the amendment of the Senate to the joint resolution. The resolution, as finally passed, proposed an unconditional abrogation of the treaty, "as it is no longer

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[1] *Congressional Globe*, Second Session, Thirty-eighth Congress, 1864–65, Part I. p. 210. For debates January 11–12, 1865, pp. 204–13 and pp. 222–34.

[2] See pp. 59–61. The speech is given in the "Proceedings" of the convention, p. 100.

for the interests of the United States to continue the same in force."[1] This resolution received the approval of the President, January 18, 1865.[2] The treaty terminated March 17, 1866.

Delegates from Canada, New Brunswick and Nova Scotia arrived at Washington January 24, 1866, and remained there until February 6. The delegates were A. J. Galt, minister of finance, and W. P. Howland, postmaster-general, representing Canada; A. J. Smith, attorney-general of New Brunswick, and W. A. Henry, attorney-general of Nova Scotia. After many days discussion the negotiations terminated unsuccessfully.[3]

The unsuccessful attempt at renewal made by the provincial delegates was followed by an equally unsuccessful attempt to continue a semblance of reciprocity by means of legislation. During the last week in February a bill with such an object in view, was introduced in the House by Mr. Justin S. Morrill, chairman of the committee on ways and means, and was debated on March 6, 7, 9, 12. But even a bill, which offered terms that could only be called recip-

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[1] *Congressional Globe*, Second Session Thirty-eighth Congress, Part 1, p. 277.

The best speeches in favor of the revision of the treaty, delivered in the Senate, were those of John P. Hale, *Congressional Globe*, Second Session, Thirty-eighth Congress, pp. 204–06, and Timothy O. Howe, *Globe*, pp 211–13, and pp. 226–29. These two speeches, with the two speeches of Mr. Ward, delivered in the House May 18 and 26, 1864 (see p. 22), state clearly and forcibly the views of the friends of the treaty.

[2] "Statutes at Large," Second Session, Thirty-eighth Congress, p. 566.

[3] "Canada and the States," Sir E. W. Watkin, pp. 405–13. Contains report of the delegates, their proposals, the counter proposals of the committee of Ways and Means, and finally the reply of the delegates.

rocal by "political" license, had no chance of success in the existing state of opinion in Congress and in the country. Mr. Morrill set the keynote of the debate when he said in his speech at the opening of the discussion, that "the treaty was an ill-omened one from the start, having been first extorted from us by the armed raid upon our fishermen in 1852, made by the combined armaments of the provinces, and led on by the imperial government; and secondly, won from us by the delusion that favor would beget fraternity. We are too old to be again deluded, and being quite able to withstand a bite, we shall be less likely to yield to a growl."[1] A few believed that the wiser policy was to cultivate friendly relations with the provinces, but the majority thought otherwise, and the bill failed to pass. One of the minority said during the debate that—

"He would not have risen, ... if he had not voted last year, with others, for an abrogation of the reciprocity treaty, and if he did not see now, from the tendencies and sympathies of the House, that the moment the bill passed from the hands of the committee of the whole it would receive its final death blow. He did not believe that there would have been thirty votes obtained in this House last year for the abrogation of the reciprocity treaty with Canada, but for the explicit understanding that some sort of reciprocity in trade would be forthwith re-established, either through the treaty-making power, or through the legislative power of the government. The people of the United States were ground down by the internal revenue taxation, and he had not felt at liberty to let the reciprocity treaty stand, without being at liberty to make some sort of bargain with the people of Canada, that whatever our internal revenues might be, the same would be levied, either by them or by us, on our imports from them. It was exclusively on that understanding that he had voted for the abrogation of the treaty. And he now saw in the additional claims of those who represented the lumber interests, and the coal and other interests of the country, that advantage was to be taken of the present opportu-

[1] *Congressional Globe*, 1865–66, March 6, 1866, p. 1210.

nity, and that never again were we to have reciprocity with the neighboring provinces. . . . . If that were to be so, he never should regret any vote that he gave in his life as he would regret his vote of last winter, to abrogate the treaty. He had given it with the understanding that it should be substantially renewed,"[1]

Why was the treaty abrogated? Charles Francis Adams,[2] minister to Great Britain, wrote February 2, 1865, to Secretary Seward that in his belief "all these measures [for abrogation] were the result rather of a strong political feeling than of any commercial considerations. I should not disguise the fact of the prevalence of great irritation in consequence of the events that had taken place in Canada; neither should I conceal my regret, as it seemed to me to be one of the cardinal points of our policy, both in a political and commercial sense, to maintain the most friendly relations with the whole population along our northern border."

Senator Wilson, of Massachusetts, said in the Senate, January 12, 1865:

"When this treaty was negotiated it was believed to be for the general interests of the country, and in Massachusetts it was especially believed to be for our fishing, manufacturing, commercial and railroad interests. I have ever been in favor of the treaty, and up to this time could never have been induced to vote against it. I am not clear now that it is not for the interests of the state I in part represent to let it stand. I am inclined to think it is for our interest that the treaty should stand as it now does. For the interests of the whole country I am of the opinion that it ought to be modified or perhaps abrogated."[3]

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[1] *Congressional Globe*. Part II, 1865–66. March 7, 1866, p. 1250. For the debate see *Globe* 1865–66, February 27, March 6, 7, 9, 12, 1866, pp. 1867, 1210–20, 1241-51, 1297-1302, 1333–43.

[2] "House Executive Documents," First Session Thirty-ninth Congress, Vol. I, Part I, p. 111.

[3] *Congressional Globe*, Second Session Thirty-eighth Congress, Part I, p. 233.

A convention composed of boards of trade and chambers of commerce of the United States and British North American provinces met at Detroit July 11–14, 1865, by invitation of the local board of trade, to protest against the abrupt termination of the reciprocity treaty. This convention was composed of business men and others, representing the leading commercial bodies of the country. Representatives were present from New York, Michigan, Massachusetts, Maine, Illinois, Ohio, Canada (west), Prince Edward Island, Pennsylvania, Nova Scotia, Canada (east), Wisconsin, Minnesota, Missouri, New Brunswick. Among these were Lyman Tremain, John V. L. Pruyn, late chancellor of the University of the State of New York, and Martin Townsend, of New York; Frederick Farley, afterward president of the national board of trade; John Welsh, afterward minister to Great Britain; A. G. Cattell and William Elder, of Pennsylvania; Joseph S. Ropes, James E. Converse and W. W. Greenough, of Massachusetts; Morrison R. Waite, afterward chief justice of the supreme court of Ohio; James F. Joy, of Michigan, and others. The convention came "to substantial unanimity and they united in urging upon the government at Washington the great importance of immediately opening negotiations with the British government for a new arrangement, at the least as liberal on both sides as the one about to expire had been, and as much broader as should appear practicable. Their action was approved by every board of trade and chamber of commerce in the country taking any interest in the matter; it was disapproved, so far as we ever heard, by none."[1]

[1] "Proceedings of the Commercial Convention held in Detroit July 11-14, 1865." Detroit, 1865. I am indebted to the son of the

And yet Mr. Larned, in his report[1] in 1871 declares that the treaty was "justly abrogated in 1866 with the very general sanction of public opinion in the country." Do the opinions of a minister to England, of a senator of the United States and of a convention of representative business men, count for nothing?[2]

THE WORKING OF THE TREATY.

Of the effect of the treaty upon the commerce of the two countries Senator Sumner said in a speech delivered in the Senate in January, 1865, in favor of its abrogation:

"This has increased immensely, but it is difficult to say how much of this increase is due to the treaty and how much is due to the natural growth of population and the facilities of transportation in both countries. If it could be traced exclusively, or in any large measure, to the treaty, it would be an element not to be disregarded. But it does not follow, from the occurrence of this measure *after* the treaty that it is on *account* of the treaty. *Post hoc ergo propter hoc* is too loose a rule for our government on the present occasion "[3]

late Joseph C. Bates, of Boston, for the loan of a scrap-book containing clippings from newspaper editorials written by Mr. Bates. I quote above from one of these editorials.

[1] "House Executive Documents," 1870–71, Vol. VIII, No. 94, p. 6.

[2] It is difficult to determine the real attitude of the principal parties in regard to reciprocity. The bill providing for reciprocity with Canada, passed in the House in 1848, was reported by a Whig committee and passed in a House containing a Whig majority. On the other hand the same bill failed in the Democratic Senate, and the opposition of another Democratic Senate threatened to cause the collapse of the negotiations in 1854. The other attempts to bring about reciprocity by legislation, and the first negotiation of a treaty was carried out by Democrats. Furthermore the support of the policy of reciprocity in 1864–65 came from the Democrats, while the Republicans opposed it. Throughout the period the slavery question, or questions connected with it, determined the attitude of parties upon questions of less pressing importance.

[3] *Congressional Globe*, 1864–65, p. 206. January 11, 1865.

Before beginning a discussion of the effects of the treaty three points must be insisted upon: (1) In a discussion based upon statistics, it must be remembered that the figures used are not mathematically accurate. Therefore conclusions drawn from them are subject to some qualification, although it is not intended to deal with distinctions so fine that they are likely to be affected by occasional inaccuracies in the details of the statistics. (2) The treaty was only one of several causes at work at the same time upon the commerce of the two countries. The increase of population, the improvement in the means of transportation through the building of canals and railroads, and the development of manufacturing industries, were acting upon trade as never before in the history of the world. (3) The working of the treaty was disturbed by two economic events, the crisis of 1857 and the civil war of 1861-65.

In sixty-four years, 1821 to 1885, the total trade (exports and imports combined) between the United States and the British provinces, increased from $2,500,495 to $88,214,020. The trade[1] by decades has been as follows:

1821	$2,500,495	1861	$51,245,224
1831	4,926,747	1871	59,727,723
1841	8,624,750	1881	87,030,472
1851	19,543,469		

The increase of trade[2] by decades has been as follows:

1821-1831	$2,426,252	1851-1861	31,701,755
1831-1841	3,698,003	1861-1871	8,482,499
1841-1851	10,918,719	1871-1881	27,302,749

[1]That is the amount of the total trade in each tenth year.

[2]That is, the amount of increase in the total trade in 1831 over 1821, 1841 over 1831, so on. For the statistics of trade from 1821-85 see Appendix, p. 59-61.

These figures show that the trade was comparatively small up to 1840; that the decade from 1841–51 witnessed the beginning of the great development of the last fifty years; that the decade from 1851 to 1861 was marked by the greatest increase of trade which has taken place down to 1881; and that the decade from 1861–71 saw the smallest increase since that of 1831–41. The decade 1851–61 included a portion of the period influenced by the reciprocity treaty, while that of 1861–71 covered the period of its abrogation, and of the disturbance caused by the civil war.

For the twelve years of the continuance of the treaty the total trade year by year was as follows:

1855	$49,000,000	1861	$50,000,000
1856	57,000,000	1862	48,000,000
1857	49,000,006	1863	46,000,000
1858	37,000,000	1864	... .
1859	45,000,000	1865	60,000,000
1860	48,000,000	1866	75,000,000

These figures show the effect of the treaty very clearly. The total trade for the last year before the treaty was $34,899,544, while for the first year of the treaty it was $57,041,594,[1] an increase of $22,-142,050 for the first year under the treaty compared with an increase of $9,184,896 during three years (1850–53) before the treaty. Under the favorable conditions furnished by the reciprocity treaty, the trade increased more than twice as much in one year as it had in there years without the treaty.

[1] I take the year 1856 because it was the first full year, the treaty going into effect March 16, 1855.

This increased trade continued with the usual fluctuations during the continuance of the treaty:

Total Trade under Treaty of 1854.	1858	$37,995,673
	1860	49,444,195
	1862	48,888,897
	1865	60,533,561
Total Trade before the Treaty.	1844	$8,181,618
	1846	9,344,150
	1848	12,029,122
	1850	16,788,141
Total Trade after the Treaty.	1867	$50,283,464
	1868	48,905,613
	1870	58,134,775
	1872	70,088,925
Total Trade under the Treaty of 1871.[1]	1875	$76,508,092
	1877	75,732,919
	1879	69,677,055
	1882	103,976,742

An examination of the preceding figures shows that the abrogation of the treaty did not seriously disturb the amount of trade. At least the effect was not permanent; for the trade had begun to recover before the negotiation of the treaty of 1871. Of course a considerable portion of this increase may have been due, and undoubtedly was due, to the natural increase of business, the result of the increase of wealth and of improvements in production and transportation, but is it not likely that the permanent effects of the treaty had something to do with this increase? May not the influence of the treaty have developed a trade which continued after its expiration? It seems probable to me, and if true, gives to the reciprocity treaty of 1854 an importance which has never been recognized.

Besides the effect of the treaty, as shown by the increase of trade, the amount of the imports into the

[1] Went into effect July 1, 1873.

United States for 1866 (the last year of the operation of the treaty), $48,528,628, gives ground for the conjecture that this unusually large quantity was due to the desire of business men to profit as much as possible by the treaty. There are two reasons for this conjecture: (1) because the fiscal year ending June 30, 1866, was not coincident with the existence of the treaty, which terminated March 17, 1866. Consequently this excessive importation was the work of less than nine months. (2) This amount of importation was not again reached until 1882, when $50,775,-581 of goods were imported from the Dominion of Canada.[1]

Mr. Larned, in his "Report on Trade with the British North American Provinces," says that—

> "To a remarkable extent our present trade with the provinces is what might be characterized as a pure *commerce of convenience*, incident merely to the economical distribution of products which are common to both countries. We exchange with them almost equal quantities of the cereals, and almost equal quantities, on an average of flour. Except so far as concerns the barley that we buy and the Indian corn that we sell to them, this trade orignates on neither side in any necessity, but is chiefly a matter of simple convenience, of economy in carriage, or of diversification in the qualities of grain. Similarly and for the like reasons we exchange with them about equal quantities of coal. We sell them a certain quantity of hides and skins, and buy half that quantity of the same articles back from them. On the other hand, they sell us provisions and wool and buy our provisions and wool to half the amount in return. Not less than one-third, probably, of the trade now carried on between the United States and the neighboring provinces is of that character, and the fact that it is kept up with so little diminution, notwithstanding the imposition of duties on both sides of the frontier, is significant of the value of the advantages that are found in it."[2]

[1] Another reason for the large imports in 1865–66 has been suggested to me by Professor Taussig: high prices in the United States due to paper money inflation, while yet there was gold in the country for export.

[2] "House Executive Documents," 1870-71, Vol. VIII, No. 94, p. 15.

This "commerce of convenience" is natural enough when we consider the geograpical relations of the two countries. The British provinces are by nature divided into groups bearing a closer relation to adjacent portions of the United States than to the other parts of the British possessions. The maritime provinces are more intimately connected with the neighboring New England states than with the Canadas, Ontario and Quebec, while the Canadas in their turn find their easiest communication with the middle states of the Union. This grouping of the various provinces has received still greater emphasis by the rapid development of the western provinces of the dominion, a development hardly begun at the time of the reciprocity treaty.

The same reason for a "commerce of convenience" appears when we examine the economic relations of the two countries. On this point Goldwin Smith says:

> "Let any one scan the economical map of the North American continent, with its adjacent waters, mark its northern zone abounding in minerals, in bituminous coal, in lumber, in fish, as well as in special farm products, brought in the north to hardier perfection, of all of which the southern people have need; then let him look to its southern regions, the natural products of which, as well as the manufactures produced in its wealthy centres of industry, are needed by the people of the northern zone; he will see that the continent is an economic whole, and that to run a customs line athwart it and try to sever its members from each other, is to wage a desperate war against nature."[1]

Furthermore a "commerce of convenience" is not the only necessary commerce between the United States and the provinces. The maritime provinces have lumber, bituminous coal and fish which they

[1] "Canada and the Canadian Question." Goldwin Smith. London, 1891. pp. 283–84.

desire to sell, and New England is anxious to buy. The Canadas, Ontario and Quebec, produce barley, eggs, and other farm products; horses, cattle and lumber, for the sale of which they look to New York and other neighboring states. All the provinces want to get American manufactures as well as the products of a more southerly climate in return.

The argument of the opponents of reciprocity, that there cannot be profitable commerce between Canada and the United States, because their products are the same, is not true. The United States includes regions and productions almost tropical. Canada has bituminous coal, which is needed in parts of the United States, and an abundance of nickel, of which there is but little in the United States. Canada has a vast supply of lumber, and the United States needs all that it can get. Both countries produce barley, but the Canadian barley is the best for making beer.[1]

"High as the tariff wall between Canada and the United State is, trade has climbed over it." In 1889 the trade between Canada and the United States was greater than that between Canada and any other country, and nearly as great as that between Canada and all the countries in the world put together.[2]

The treaty was intended to provide for the exchange of natural products between the two countries, and with very few exceptions these products were in the crudest possible condition, just as they were taken from the field or forest, or dug from the soil, or obtained from the sea. They were raw ma-

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[1] "The Canadian Question," p. 287–88.

[2] 1889—Canada and Great Britain, $38,105,126 exports, $42,249,555 imports; Canada and the United States, $48,522,404 exports, $56,-368,990 imports.

terials in the fullest sense of the word, and may be grouped under five heads: products of the mine, of the forest, of the sea, animal products and agricultural produce.

Products of the Mine.—

Coal, ores of metals of all kinds; stone or marble, unwrought; grindstones, wrought and unwrought; slate; gypsum, ground and unground.

Products of the Forest.—

Timber and lumber, round, hewed, sawed; firewood; pitch, tar and turpentine.

Products of the Sea.—

Fish and fish products.

Animal products.—

Animals of all kinds; meats, fresh, smoked, salted; hides, furs, skins, undressed; poultry, eggs, butter, cheese, tallow, lard, horns, manures, pelts, wool.

Agricultural products.—

Grain, flour and breadstuffs; cotton-wool, seeds and vegetables; dried and undried fruits; plants, shrubs and trees; rice, broom-corn and bark; flax, hemp and tow; tobacco, unmanufactured.

In this list a few are included which may, perhaps, not be fairly classed as raw products. For instance, flour, smoked and salted meats, dried fruits; timber and lumber, round, hewn and sawed. But these form a small number compared with the total number provided for by the treaty.

The trade for the ten years, 1853–1863, may be summarized as follows:[1]

Products of the Mine (imported into United States).—

1853	$ 58,400
1856	84,228
1860	318,537
1863	1,114,831

Products of the Forest.—

1853	2,589,898
1856	3,345,284
1860	4,019,278
1863	3,679,559

Products of the Sea.—

1853	73,422
1856	140,948
1860	185,873
1863	957,166

Animal Products.—

1853	1,107,870
1856	2,375,388
1860	3,557,912
1863	3,133,463

Agricultural Produots.—

1853	4,949,576
1856	11,864,836
1860	10,013,799
1863	7,005,826

The largest imports before the treaty were of agricultural produce, and in 1863 they remained still the largest, having also made the largest gain—about three millions—during the decade. The second place, both in 1853 and in 1863, belonged to the products of the forest, the gain, however, being inferior to that made by animal products. Animal

[1]For detailed statistics see Appendix, pp. 63–64.

products occupied the third place at the beginning and the ending of the period, while the gain was superior to that made by the products of the forest. The fourth and fifth places were held by fish products and the products of the mine, the latter displacing the former between 1853 and 1863.

Turning now to the imports from the United States into Canada, we have the following figures:

Products of the Mine (imported into Canada).—

1853	$ 126,586
1856	488,984
1860	406,688
1863	647,965

Products of the Forest.—

1853	66,620
1856	302,904
1860	137,392
1863	134,281

Products of the Sea.—

1853	383,436
1856	411,716
1860	227,112
1863	281,023

Animal Products.—

1853	570,587
1856	2,896,858
1860	1,679,912
1863	3,050,294

Agricultural Products.—

1853	668,113
1856	3,809,112
1860	4,603,114
1863	8,137,447[1]

As is the case of the United States imports, the largest item in the Canadian in 1853 was that of

[1] For detailed statistics see Appendix, pp. 63–64.

agricultural produce, and this proportion remained the same in 1863, the increase being remarkable—about seven and a-half millions.[1] The second place was held by animal products, both at the beginning and at the end of the period, the gain also being next in amount to that of agricultural produce. Products of the sea occupied the third place at the beginning, but had fallen to fourth place at the end, with the additional disgrace of having had a decrease instead of a gain during the ten years. Products of the mine rose from fourth place to third from 1853–1863, making a gain in amount next to that of animal products. Finally products of the forest held and retained the fifth place.

The following figures show the amount of the trade in a few leading articles:[2]

Animals (imported into United States.)—

		INCREASE.
1862....................	$1,532,957	
1865....................	5,503,318	$3,970,361

Barley.—

1862....................	1,095,443	
1865....................	4,093,202	2,997,759

Timber.—

1862....................	2,526,658	
1865....................	4,515,626	1,938,968

Oats.—

1862....................	634,176	
1865....................	2,216,722	1,582,546

[1]These figures are liable to considerable qualification, being at best rough estimates. See Appendix, p. 63, note.

[2]The figures are taken from the reports of the Minister of Finance of Canada and of the Secretary of the Treasury of the United States. Separate tables for articles included in the treaty are given for Canada, 1858–1863; and for the United States, July 1, 1861, and June 30, 1866.

Wool.—

		INCREASE.
1862....................	569,839	
1865....................	1,527,275	957,436

Meats.—

1862....................	128,935	
1865....................	850,328	721,393

Coal.—

1862....................	614,556	
1865....................	1,210,004	595,448

Grain, all kinds (imported into Canada).—

1858....................	2,078,464	
1863....................	5,062,610	3,984,146

Meats.—

1858....................	544,366	
1863....................	1,238,923	694,557

Coal.—

1858....................	242,700	
1863....................	548,846	306,146

Animals.—

1858....................	240,186	
1863....................	520,835	280,649

Hides.—

1858....................	125,000	
1863....................	384,951	259,951

Cheese.—

1858....................	90,045	
1863....................	294,327	204,282

Wool.—

1858....................	11,101	
1863....................	208,858	197,757

Flour.—

1858....................	750,580	
1863....................	898,029	147,449

These figures show that the articles of first importance on the side of the United States were those of animal products, and barley, timber, oats, wool, meats and coal; on the side of Canada grain occupied the first place, followed by meats, coal, animals, hides, cheese, wool and flour. If barley and oats were combined in the United States imports as they are in the Canadian under the single head of grain, they would take the first place, and grain would then be the largest import into both countries. Of course these figures are not for the same years and some slight allowance must be made for the varying conditions of the two periods. The period 1858-1863 covers only a part of the war period, while the years 1862-1865 are wholly included in that period. As was said at the beginning of the discussion, the course of trade under the treaty was disturbed by two great economic events, so that no certain inference may be drawn from the actual course of trade. Moreover, the whole period of the treaty was almost too short to allow sound conclusions to be drawn from the figures representing its progress.

The trade between the United States and the other British provinces from 1849–1863 can be summarized as follows: the figures are taken from a table of leading exports to British provinces other than Canada from 1849–1863.[1]

Wheat.—

1849	332.765
1853	208,956
1856	268,959
1860	90,049
1863	110,333

[1]See Appendix, p. 66.

Wheat Flour.—

1849	1,518,922
1853	784,498
1856	3,120,787
1860	3,044,243
1863	4,420,748

Indian Corn.—

1849	126,791
1853	105,404
1856	136,774
1860	85,915
1863	131,552

Meal, Corn and Rye.—

1849	625,691
1853	135,040
1856	631,959
1860	206,881
1863	286,238

The most noticeable features in these figures are the decline in the amount of exports in wheat, corn and rye meal, and the large increase in wheat flour. The population of the maritime provinces was small and their resources were undeveloped. New England had not yet come to need the raw materials of which the provinces possessed an abundance, and therefore the resources were not developed during the continuance of the treaty. These reasons probably explain to a considerable extent the failure of the treaty to produce a greater effect upon the trade. The remarkable increase in the export of wheat-flour from a million and a-half to nearly four millions and a-half—may be explained by the fact that the United States imported wheat and re-exported it in the form of wheat-flour.

The following figures show the relative amount of trade between the United States and Canada, and

between the United States and the other British provinces:

UNITED STATES IMPORTS.[1]

	Canada.	Other Provinces.
1850	4,285,470	1,358,992
1853	5,278,116	2,272,602
1856	17,488,197	3,822,224
1860	18,861,673	4,989,708
1862	15,253,152	4,046,843

UNITED STATES EXPORTS.[1]

	Canada.	Other Provinces.
1850	5,930,821	3,618,214
1853	7,829,099	5,311,543
1856	20,883,241	8,146,108
1860	14,083,114	8,623,214
1862	12,842,504	8,236,611

The proportion of trade with these two groups, the Canadas and the maritime provinces, Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland, seems to have been little affected by the treaty. The imports from Canada were three times as large as those from the maritime provinces in 1850 and in 1862. The exports, too, bore about the same proportion to each other in both years, those to Canada being somewhat less than twice as large as those to the maritime provinces. The effect of the treaty appears much more striking in the Canada trade than in that to the maritime provinces. From 1853–1856 the imports from Canada were more than trebled, while those from the maritime provinces do not double. The exports to Canada during the same period nearly treble, while those to the other pro-

[1]Statistics of comparative amounts of exports 1849–1863; of imports 1850–1863, Appendix p. 65.

vinces again do not double. The total trade between the United States and Canada was in—

1853	13,107,215
1856	38,371,438

The total trade between the United States and the maritime provinces was in—

1853	7,584,145
1856	11,968,332

During the discussion over the abrogation of the treaty the common assertion was that the United States allowed the principal Canadian exports to enter free of duty, while Canada, on the other hand, imposed a duty upon exports of manufactured goods of the United States. The following figures show the amounts of free and dutiable goods imported into the United States and Canada in several different years from 1850-1862:

UNITED STATES IMPORTS.[1]

	Free.	*Dutiable.*
1850	787,599	4,856,863
1853	1,418,250	6,132,468
1856	20,488,697	821,724
1860	23,180,971	690,411
1862	18,770, 737	529,258

CANADIAN IMPORTS.

	Free.	*Dutiable.*
1850	791,128	5,803,732
1853	1,125,565	10,656,582
1856	9,933,586	12,770,923
1860	8,746,799	8,526,230
1862	19,044,374	6,128,783

Of the United States imports the amount of free importation increased from $787,599 in 1850 to

[1]Comparative amount of free and dutiable goods, 1850–1863, Appendix, p. 64.

$23,180,971 in 1860, while that of dutiable goods decreased from $6,132,468 in 1853 to $529,258 in 1862. Of Canadian imports the free importations increased from $791,128 in 1850 to $19,044,374 in 1862, while the dutiable goods remained about the same, amounting to $5,803,732 in 1850 and to $6,128,-783 in 1862. An actual increase in the amount of dutiable goods occurred from 1853-1856. The figures for these years were as follows:

1853	10,656,582
1854	13,449,341
1855	11,449,472
1856	12,770,923

The amounts gradually declined, until in 1862 it reached the lowest amount of the twelve years, 1851-1862 inclusive. This large amount of dutiable goods may have been the result of the better trade relations established between the two countries by the treaty, although the largest amount of dutiable imports during the period 1850-62 was in 1854, the year before the treaty went into operation. The amount of dutiable goods imported into the United States, therefore, declined from about $5,000,000 in 1850 until it reached the small amount of $529,000 in 1862—not only a smaller amount absolutely, but, of course, a much smaller amount in proportion to the increased amount of trade. The amount of dutiable goods imported into Canada, on the other hand, increased absolutely, although the amount bore a smaller proportion to the total trade. The increase in free goods was about the same in both countries, except for the years, 1856 and 1860, when the increase of United States imports was much greater than that of Canadian imports.

The treaty of 1854 applied almost exclusively to natural products, leaving manufactures upon the same foundations upon which they had rested before the treaty. Curiously enough, however, the question of manufactures played an important part in the abrogation of the treaty. The one really serious complaint made by the opponents of the treaty against it, and admitted even by its friends, was the violation of the spirit of the treaty by the province of Canada by the increase of the provincial tariff on articles not included in the treaty.

The importance of this action of Canada will be understood when it is remembered that the population of Canada formed the largest portion of the population of the provinces, being 2,500,000 out of a total of 3,253,000. The Canadian trade, therefore, formed by far the largest part of the trade of the British provinces, that of the remainder, containing only about 700,000 inhabitants, being relatively unimportant. With these other provinces there was no dissatisfaction during the existence of the treaty. Trade with them was a local matter of interest only to the people of New England. Their slow development had not in 1860 made clear the importance of their natural resources. Hence the arguments for a closer union with the maritime provinces, so prevalent to-day, had not yet made their appearance.

The increase of the Canadian tariff was a part of the same policy which had dictated the negotiation of the reciprocity treaty, a policy having for its object the development of the resources of the provinces. To carry out this policy the Canadian government embarked on a system of internal improvements destined to develop their resources. Canals were built

and improved, the navigation of the St. Lawrence was improved, and railroads were constructed. The idea of the government seems to have been to direct the carrying trade of the new western states of the Union from the railroads and canals of New York to Canadian canals and railroads. The negotiation of the reciprocity treaty gave a favorable opportunity for such a scheme.

These improvements in transportation were undertaken by the government and were mainly dependent upon subsidies and municipal bonds. No doubt the object of these works was as much political as commercial, the desire of the Canadian statesmen having been to consolidate the separate provinces and by an increase in the material wealth of the people to remove all discontent, which from the situation of the country, so easily developed into a desire for annexation to the United States.

Whatever the objects of the Canadian government, such works required large revenues for their completion.[1] Some increase of taxation became necessary. The easier method seemed to be to raise the tariff. This could not be done in the case of those articles included in the treaty, but could be done in the case of manufactured goods. This was done, and then arose the grievance of which the Americans so bitterly complained. From year to year, as a greater revenue was required, a higher tariff was imposed to the increasing disgust of the American manufacturer.

[1] "Canada and the States." Sir E. W. Watkin, p. 396.

The yearly changes from 1855–1859 in certain articles were as follows:

	1855.	1856.	1857.	1858.	1859.
Molasses	16%	11	11	18	30
Sugar (refined)	32	28	25	26½	40
Sugar (other)	27½	20	17½	21	30
Boots and Shoes	12½	14½	20	21	25
Harness	12½	17	20	21	25
Cotton Goods	12½	13½	15	15	20
Iron Goods	12½	18½	15	16	20
Silk Goods	12½	13½	15	17	20
Wool Good	12½	14	15	18	20[1]

The complaint of the Americans might have had a doubtful justification before the outbreak of the civil war, while the tariff of 1857 was in force. It could have none at all after the war tariffs came into existence. Even under the tariff of 1857, the tariff rate of the United States upon cotton and woolen goods was 24 per cent., 4 per cent. higher than the Canadian duty under the tariff of 1859. But the justification of the complaint does not rest with the comparative rate of duties. No formal complaint of a violation of the treaty was made by either party. The United States claimed that the treaty was made with the understanding that the tariff of Canada would remain the same as it had been at the conclusion of the treaty. But no clause to such an effect had been added to the treaty, and the United States could expect only a strict adhesion to the terms of the treaty.

[1] "House Executive Documents," 1859–1860, Vol. 13, No. 96, p. 10. Report of Israel T. Hatch on reciprocity treaty, March 28, 1860.

The following figures show the effect of the higher Canadian tariff upon the exports of manufactures from the United States:[1]

Cotton Manufactures.—

1858–59	$363,016
1862–63	64,495

Iron Manufactures, (except Pig Iron).

1858–59	761,619
1862–63	395,907

Boots and Shoes.—

1858–59	211,147
1862–63	22,860

Tobacco (Manufactured).—

1858–59	1,205,684
1862–63	76,026

House Furniture.—

1858–59	136,765
1862–63	66,718

Books.—

1858–59	154,034
1862–63	25,164

Hats.—

1858–59	116,150
1862–63	14,078

Musical Instruments.—

1858–59	104,534
1862–63	67,445

Unenumerated.—

1858–59	624,534
1862–63	401,227

These figures show a marked decrease in the exports of American manufactures to Canada from 1858 to 1863. Undoubtedly the increase in the rate

[1] For detailed statistics see Appendix, p. 66.

of the Canadian duties upon manufactured articles, was one of the causes of this falling off. Yet it must be remembered that the civil war broke out during the period, and that the effect which it produced upon the export of manufactures must have been considerable, especially in the case of the cotton manufactures. The needs of the United States increased, while its power of production diminished. This, of course, applied to all branches of production.

The following figures show the total amounts of the exports of American manufactures to Canada for the several years from 1858-1859 to 1862-1863.

1858–59	4,185,516
1859–60	3,548,114
1860–61	3,501,642
1861–62	2,596,930
1862–63	1,510,802

The privilege of free navigation of the river St. Lawrence, conferred by the fourth article of the treaty, had long been a subject of negotiation between the United States and Great Britain. The United States claimed a right of free navigation as "a riparian state of the upper waters of the river and of the lakes which feed it."[1] This privilege, granted temporarily in 1854, was given permanently by article XXVI of the treaty of 1871.

Besides the privilege of navigating the St. Lawrence, that of navigating those canals of Canada which formed the means of communication between the lakes and the sea, was granted by the fourth article of the treaty. This privilege proved a bone of contention between the two countries.

The interest of the United States in the navigation of the Canadian canals by its citizens upon the same

[1] Hall's "International Law," p. 118.

terms with Canadians related to the increasing needs of means of transportation from the grain producing states of the northwest to the sea-coast. The railroad system in the United States was still in the early stages of its development, the great through lines between the interior and the sea-coast not being completed until nearly ten years after the period of the reciprocity treaty. Great dependence was still made upon the canal system of the country, and many attempts were made for the improvement of the existing system. Doubtless, too, the blockade of the Mississippi during the civil war, thus cutting off one means of transportation to the sea, made the desire for any other possible avenue of communication with the sea stronger than it would otherwise have been.

The inadequacy of the existing means of transportation led, too, to a natural suspicion on the part of the producers of western grain that the owners of railroads and canals would use them for the furtherance of their own interests to the injury of the helpless producers. Thus early appeared the western hostility to railroads, which later influenced the legislation of many states.

Besides the western producers, anxious for a new avenue for the transportation of their products to market, a certain commercial element favored the continuance of free navigation, hoping thereby to profit by means of the larger trade which would be brought to their doors. This element seems to have been most active in the northern parts of New York, especially in Rochester, Oswego and Ogdensburg. Their expectation seems to have been to obtain a large share of the business of transportation

from the west to the sea-coast. The course would naturally be, they thought, from the lakes through the Welland canal and Lake Ontario to their own wharves. Then they would profit greatly by such a trade.

But the interest of Canada in granting the privilege of navigating her canals to foreigners seems to have been clearly connected with the policy of internal development to which I have already referred. The canals were built for the benefit of Canada, and the grant of special privileges to Americans was expected to work towards that end. The diversion of a large part of the carrying trade from American canals and railroads would be a great gain to Canada and would surely cause such an increase of prosperity that all desire for annexation would die out of the minds of the people. Unfortuately the laws of nature were unfavorable to this scheme. For a good portion of each year the canals and rivers of Canada are frozen over, and consequently this new outlet for the surplus products of the west could have only a limited value. The attempt to thwart the laws of nature did not turn out as the projectors expected.

In the report of Hon. W. P. Howland, finance minister for Canada for the year 1862,[1] the results of this policy are examined. He says that "the movement of property on the provincial canals shows a steady increase."

On the Welland canal the movement was:

	Tons Property.	*Tonnage of Vessels.*
1859........	709,611	856,918
1860........	944,084	1,238,509
1861........	1,020,483	1,327,672
1862........	1,243,774	1,476,842

[1] "House Executive Documents" 1863–1864, Vol. 9, No. 32, pp. 37–40. (Extract.)

On the St. Lawrence canals the movement was:

1859........	631,769	765,636
1860........	733,596	824,465
1861........	886,908	1,009,469
1862........	964,394	1,049,230

In 1860 the tolls on the St. Lawrence canals were abolished and those on the Welland canal reduced.

The report of the finance minister says upon this point, that though there has been an increase in the movement of property by the St. Lawrence route since the change, this increase must not be considered as due entirely to the remission of tolls. "The greatly increased production of cereals in the western states and the figures[1] presently introduced will show that in proportion to that increase, and to the whole volume of agricultural produce moved from Lakes Erie and Michigan to tide-water, we have not obtained so large a traffic since the removal of the tolls as we obtained prior to the adoption of that policy."

[1]Movement of American Breadstuffs.

Year.	*Down the St. Lawrence.*	*Through Erie Canal.*
1856	.........1,209,612 bus.	15,342,833 bus.
1857	.........1,930,280 "	10,601,532 "
1858	.........1,876,933 "	13,757,283 "
1859	.........1,988,759 "	10,371,966 "
1860	.........1,846,462 "	23,912,000 "
1861	.........3,103,153 "	34,427,800 "
1862	.........5,320 054 "	39,240,131 "

From this table it appears that for seven years the transportation of breadstuffs by the St. Lawrence route was—

1856......	7. 3 per cent.	1860....	7.16 per cent.
1857......	15. 4 "	1861....	8.26 "
1858......	12.01 "	1862....	11.04 "
1859......	16.08 "		

From "House Executive Documents" First Session, Thirty-eighth Congress, Vol. IX, No. 32, p. 38. Extract from Finance Minister's Report for Canada, 1862.

While the Canadian canals failed to reap the benefits expected from the reduction of tolls, the Erie canal materially increased its tolls. This increase amounted to an advance of seventy cents per ton on wheat and flour from Buffalo to tide-water, and of forty cents per ton from Oswego to tide-water.

The finance minister concludes from the results of the free canal system that the policy has been productive of benefit, neither to the producer nor to the consumer of western breadstuffs. He says that "it can be shown from trustworthy data that, in so far as the actual cost of transportation is concerned, western produce can be carried to tide-water much cheaper by the St. Lawrence than by any competing route." The cause of the failure of Canadian canals to obtain a large proportion of the western trade is due, in the opinion of the minister, to "the absence of sufficient competition among forwarders engaged in the St. Lawrence trade, to the financial relations between shippers engaged in the western trade and the capitalists of New York, and finally and chiefly, to the lower rates of freights from New York to Europe, occasioned by the greater competition at that port than is to be found at Quebec or Montreal." "There is but one course open for securing that quota of the western trade which the advantages of the St. Lawrence route give us reason to anticipate. If we can give to the owners of the largest vessels now profitably engaged in the trade of Lake Michigan the option of trading to Kingston and the St. Lawrence, or to Buffalo, as may be found most profitable, we shall have thrown down the barrier which now forces the main current of trade into the Erie canal. We shall have more than balanced the greater insur-

ance and freights charged from our seaports to Europe over the corresponding charges from New York, and we may thereafter expect Quebec and Montreal to take rank among the greatest grain marts of this continent.''

The value of the navigation of the Canadian canals can, I think, be safely inferred from this report of the Canadian minister of finance. Notwithstanding the importance attached to it by the inhabitants of the northwest, the results of its practical use for a series of years were unsatisfactory if not insignificant. In spite of every effort to direct the carrying trade from the Erie canal the Canadian canals obtained only a small fraction of the total trade, and this small fraction seemed to bear a smaller and smaller proportion to the total traffic between the west and the sea-coast.

An examination of the history and effect of the reciprocity treaty of 1854 leads to the conclusion that the measure was favorable to the development of trade between the United States and the British provinces. The statistics of trade indicate a greater increase of commerce during the continuance of the treaty than at any other time during the period from 1820–1880. This increase appears most clearly during the early years of the treaty, for the later years were disturbed by extraordinary economic events. But dependence must not be had exclusively upon statistics, for there were features of the trade which cannot be illustrated by means of statistics. The "commerce of convenience" and the gain to both countries, and especially to the United States, of obtaining raw materials free of duty are subjects incapable of statistical illustration. Imperfections

there may have been, and certainly were, as was most natural in a first attempt at the settlement of trade relations on a new basis. These imperfections, however, were not the cause of its abrogation. The cause was political rather than economical or commercial. There is very little doubt, as has been said already, that the attitude of the English towards the North during the civil war, was the direct cause of the abrogation of the treaty. The evident hostility of the English aroused still more fully all the dormant resentment of the North, stirred as it was already by the southern rebellion. In such a state of feeling the result of any discussion of the treaty must prove fatal. And so it did. The controversy in regard to renewal began just as the hostility to England was strongest. The arguments of the friends of reciprocity were of no avail. The opponents of the measure appealed to the patriotism of the people, and to their self-interest as well. They showed the great loss of revenue caused by the existence of the treaty; they made it clear that the British colonists were profiting from the needs of the Americans; and they clinched the argument by reminding the people of the hostility of those very people who were growing rich from their necessities. The majority are moved more by their feelings than by their judgment. The business sentiment of the country favored a continuance of the policy of reciprocity, but it was overruled by the burst of patriotic feeling aroused throughout the nation.

The unfortunate fate of the reciprocity treaty has given it a false position in the economic history of the country. As the first measure of its kind in the trade relations of the United States and Canada and

with no successor as yet, it seems an isolated thing, unrelated to the preceding or succeeding periods. But this was not really the case. The years from 1846–1870 witnessed the development of a policy on the part of the principal nations of the world in favor of the removal of many of the existing restrictions upon international trade. This policy was shown by the repeal of the corn laws in England, by the develpment of the zollverein in Germany, by the negotiation of numerous commercial treaties and by the reduction of import duties in various countries. In the United States the tendency found expression in the negotiation of the reciprocity treaty and in the reduced tariffs of 1846 and 1857. But this movement, unfortunately, was interrupted by the outbreak of the civil war in the United States and by the Franco-Prussian war in Europe. The consequence of these two events was the overthrow of the liberal movement in Europe and America. The United States needed greater revenues for the conduct of the war and for the payment of the debt thus incurred. Europe since 1870 has been an armed camp, and enormous revenues are needed to keep in constant readiness the millions of soldiers, the large navies and the costly defences required in such a state of affairs. With the downfall of the liberal movement disappeared the best hopes of better trade relations between the United States and the British provinces.

APPENDIX.

1820–1850.

Trade Between the United States and the British Provinces.

Year.	*Imports United States from British North America.*	*Exports United States to British North America.*
1821	$490,704	$2,009,791
1822	526,817	,897,559
1823	463,374	1,821,460
1824	705,931	1,775,724
1825	610,788	2,539,964
1826	650,316	2,585,549
1827	445,118	2,830,674
1828	447,659	1,674,674
1829	577,542	2,764,909
1830	650,303	3,786,373
1831	864,909	4,061,838
1832	1,229,526	3,614,385
1833	1,793,393	4,471,084
1834	1,548,733	3,535,276
1835	1,435,168	4,047,888
1836	2,427,571	2,651,266
1837	2,359,263	3,288,966
1838	1,555,570	2,723,491
1839	2,155,146	3,563,454
1840	2,007,767	6,100,001
1841	1,968,187	6,656,563
1842	1,762,001	6,190,309
1843	857,696	2,724,422
1844	1,465,715	6,715,903
1845	2,020,065	6,054,226
1846	1,937,717	7,406,433
1847	2,343,937	7,985,543
1848	3,646,467	8,382,655
1849	2,826,880	8,104,267

The preceding table is taken from the report of the committee on commerce of the House of Representatives, which was drawn up by Elijah Ward and was presented in April, 1864. It is in the "Reports of Committees," First Session, Thirty-eighth Congress, 1863–1864, Vol. I, No. 39, p. 1–2.

1850–1885.

TRADE BETWEEN THE UNITED STATES AND THE BRITISH PROVINCES.

Year.	*Imports United States from British North America.*	*British North America from United States.*
1850	5,179,500	11,608,641
1851	5,279,718	14,263,751
1852	5,469,445	13,993,570
1853	6,527,559	19,445,478
1854	8,784,412	26,115,132
1855	15,118,289	34,362,188
1856	21,276,614	35,764,980
1857	22,108,916	27,788,238
1858	15,784,836	22,210,837
1859	19,287,565	26,761,618
1860	23,572,796	25,871,399
1861	22,724,489	28,520,735
1862	18,515,685	30,373,212
1863	17,191,217	29,680,955
1864	29,608,736	7,952,401
1865	33,264,403	27,269,158
1866	48,528,628	27,905,984
1867	25,044,005	25,239,459
1868	26,261,378	22,644,235
1869	29,293,766	21,680,062
1870	36,265,328	21,869,447
1871	32,542,137	27,185,586
1872	36,346,930	33,741,995
1873	37,175,244	45,193,042
1874	34,173,586	51,785,154
1875	27,866,615	48,641,477
1876	28,805,964	43,873,789
1877	24,164,755	51,568,164

Year.	Imports United States from British North America	British North America from United States.
1878	25,044,811	49,186,384
1879	25,719,771	43,957.284
1880	32,988,564	40,610,949
1881	37,684,101	49,346,371
1882	50,775,581	53,201,161
1883	44,294,158	62,855,790
1884	38,399,835	57,740,714
1885	36,695,685	51,518,335

These figures are from the "Quarterly Reports of the Bureau of Statistics," 1885–1886, p. 371. The data for the United States are for fiscal year ending June 30. Those for the British provinces, 1850–1863, are for the calendar year. Those for 1864 for the British provinces are for six months ending June 30, 1864.

EXPORTS TO CANADA AND THE PROVINCES.

Year.	Domestic.	Foreign.
1821	2,009,336	455
1822	1,881,273	16,286
1823	1,818,113	3,347
1824	1,773,107	2,617
1825	2,538,224	1,740
1826	2,564,165	24,384
1827	2,797,014	33,660
1828	1,618,288	56,386
1829	3,724,104	40,805
1830	3,650,031	136,342
1831	4,026,392	35,446
1832	3,569,302	45,083
1833	4,390,081	81,003
1834	3,477,709	57,567
1835	3,900,545	14[illegible],343
1836	2,456,415	194,851
1837	2,992,474	296,512
1838	2,484,987	238,504
1839	3,418,770	144,684
1840	5,895,966	204,035

Year.	*Domestic.*	*Foreign.*
1841	6,292,290	364,273
1842	5,950,143	240,166
1843	2,617,005	107,417
1844	5,361,186	1,354,717
1845	4,844,966	1,209,260
1846	6,042,666	1,363,767
1847	5,819,667	2,165,876
1848	6,399,959	1,982,696
1849	5,932,106	2,172,161
1850	7,758,291	1,790,744
1851	9,060,387	2,954,536
1852	6,655,097	3,853,919
1853	7,404,087	5,736,555
1854	15,204,144	9,362,716
1855	15,806,642	11,999,378
1856	22,714,697	6,314,652
1857	19,936,113	4,326,369
1858	19,338,959	4,012,768
1859	18,029,254	6,622,473
1860	18,667,429	4,038,899
1861	18,883,715	3,861,098
1862	18,652,012	2,427,103
1863	28,629,110	2,651,920

"House Executive Documents," 1863-1864, Vol. 9, No. 32, p. 6. Years end September 30, 1821-1842, and June 30, 1843-1863.

STATEMENT EXHIBITING IN CONTRAST THE VALUE OF EACH CLASS OF IMPORTS, INTO THE UNITED STATES AND THE PROVINCE OF CANADA, FROM THE OTHER, UNDER THE TREATY.

	1850.		1851.		1852.	
	Into U. S.	Into Canada.	Into U. S.	Into Canada.	Into U. S.	Into Canada.
Products of the Mine.	———	41,587	17,623	62,516	192	64,857
Products of the Forest	1,539,488	45,505	1,279,929	18,620	1,838,775	116,159
Products of the Sea...	30,943	21 478	43,784	26,494	50,289	31,079
Animals and Products	490,477	455,036	564,787	962,176	966,189	454,475
Agricultural Products	2,706,362	427,084	1,937,293	676,327	3,277,929	473,137
Total............	4,767,270	930,685	3,843,416	1,746,133	6,133,374	1,139,707

	1853.		1854.		1855.	
	Into U. S.	Into Canada.	Into U. S.	Into Canada.	Into U. S.	Into Canada.
Products of the Mine.	58,400	126,566	118,628	256,182	23,303	425,739
Products of the Forest	2,589,898	66,620	2,131,725	107,459	3,016,880	186,830
Products of the Sea..	73,422	383,436	85,472	74,851	148,550	261,853
Animals and Products	1,107,870	570,587	684,439	845,591	1,485,925	1,878,664
Agricultural Products	4,949,576	668,113	5,295,667	1,500,521	11,801,435	4,972,475
Total..............	8,779,166	1,815,342	8.305,931	2,784,604	16,476,093	7,725,561

	1856.		1857.		1858.	
	Into U. S.	Into Canada.	Into U. S.	Into Canada.	Into U. S.	Into Canada.
Products of the Mine.	84,228	488,984	189,894	509,494	93,405	324 374
Products of the Forest	3,345,284	3 2,904	3,393,068	411,820	3,290,383	232,177
Products of the Sea ..	140,948	411,716	154,417	314,226	158,485	157,674
Animals and Products	2,375,388	2,896,838	1,974,516	2,134,339	2,231,786	1,464,873
Agricultural Products	11,864,836	3,809,112	7,100,413	5,272,151	5,740,305	3,385,517
Total	17,810,684	7,909,554	12,812,308	8,642,080	11,514,364	5,564,615

	1859.		1860.		1862.		1863.	
	Into U. S.	Into Canada.	Into U. S.	Into Canada.	Into U. S.	Into Canada.	Into U. S.	Into Canada.
Products of the Mine.	227,911	328,139	318,537	406,688	1,073,565	510,081	1,114,831	647,965
Products of the Forest	3,524,850	182,113	4,019,278	137,392	2,980,477	181,519	3,679,559	134,281
Products of the Sea...	201,583	183,575	185,873	227,112	1,087,018	268,045	957,166	281,028
Animals and Products	3,391,772	1,758,428	3,557,912	1,679,912	3,124,203	2,658,217	3,133,463	3,050,294
Agricultural Products	6,278,351	4,671,882	10,013,799	4,603,114	8,860,002	17,717,846	7,005,826	8,137,447
Total.....	13,624,467	7,104,137	18,095,399	7,054,218	17,116,260	14,335 708	15,890,845	12,251,010

The statistics for the years 1850–1860 are from the Reports of Committees (House), Vol. 3, No. 22, p. 36.

Those for 1862–1863 are my own, calculated from the returns of the Minister of Finance of Canada and the Secretary of the Treasury of the United States given in their reports, p. 40, note.

Imports into Canada from United States.

	Value of Free Goods.	Dutiable Goods.	Total Imports.	Amount Duties Paid.	Rate.
1850	791,?28	[illegible]	[illegible]	[illegible]	[illegible]
1851	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1852	[illegible]	7,412,008	[illegible]	[illegible]	[illegible]
1853	1,125,??	10,?54,?92	11,792,167	[illegible]	18.34
1854	2,?93,736	13,440,241	15,5??,???	[illegible]	16.42
1855	9,25?,2?6	11,449,672	[illegible]	[illegible]	15.??
1856	9,?9?,5??	12,770,923	22,704,509	[illegible]	16.13
1857	10,2?8,221	9,9??,?30	20,224,651	[illegible]	16.??
1858	7,161,2??	8,473,?06	15,6?5,5?5	1,611,711	19 62
1859	8,?00,1??	9,092,?61	17,592,916	1,9?5,135	20.??
1860	8,744,790	8,528,239	17,273,029	1,759,2?8	20.64
1861	12,?70,?0?	8,29?,?20	25,0??,2?8	1,5?4,???	19.??
1862	19,044,374	6,129,783	25,173,157		

"House Executive Document," 1863–64, Vol. 9, No. 32, p. 8. Calendar year.

"Report of A. T. Galt, Minister of Finance," March, 1862, p. 19, except for 1862.

Total Import from Canada and Provinces.

	Free by Ordinary Laws.	Free by Treaty.	Total Free.	Paying Duty.	Total Imports.
1850	787,599		787,599	4,856,863	5,644,462
1851	1,690,052		1,690,052	5,003,070	6,693,122
1852	980,289		980,289	5,130,010	6,110,299
1853	1,418,250		1,418,250	6,132,468	7,550,718
1854	639,143		639,143	8,288,417	8,927,560
1855	906,786	7,197,337	8,104,123	7,032,611	15,136,734
1856	1,081,611	19,407,086	20,488,697	821,724	21,310,421
1857	1,016,342	20,280,210	21,296,552	827,744	22,124,296
1858	582,532	14,732,255	15,314,787	491,732	15,806,519
1859	2,099,420	16,884,416	18,983,836	733,715	19,727,551
1860	2,734,385	20,446,586	23,180,971	680,411	23,861,381
1861	2,494,997	20,047,525	22,542,522	520,411	23,062,633
1862	1,618,180	17,152,552	18,770,732	529,258	19,299,995
1863		15,780,343		872,282	

"House Executive Documents," 1863–64; Vol. 9, No. 32, p. 7; year ending June 30.

EXPORTS FROM UNITED STATES TO CANADA AND OTHER PROVINCES.

Year.	*Exports United States to Canada.*	*United States to Other Provinces.*
1849	4,234,724	3,869,543
1850	5,930,821	3,618,214
1851	7,929,140	4,085,783
1852	6,717,060	3,791,956
1853	7,829,099	5,311,543
1854	17,300,706	7,266,154
1855	18,720,344	9,085,676
1856	20,883,241	8,146,108
1757	16,574,895	7,637,587
1858	17,029,254	6,622,473
1859	18,940,792	9,213,832
1860	14,083,114	8,623,214
1861	14,361,858	8,383,755
1862	12,842,504	8,236,611
1863	19,898,718	11,382,312

From "House Executive Documents," first session Thirty-eighth Congress, 1863–1864, Vol. IX, No. 32, p. 5. The years end June 30.

Year.	*Imports United States from Canada.*	*United States from Other Provinces.*
1850	4,285,470	1,358,992
1851	4,956,471	1,736,651
1852	4,589,969	1,520,330
1853	5,278,116	2,272,602
1854	6,721,539	2,206,021
1855	12,182,314	2,954,420
1856	17,488,197	3,822,224
1857	18,291,834	3,832,462
1858	11,581,571	4,224,948
1859	14,208,717	5,518,834
1860	18,861,673	4,989,708
1861	18,645,457	4,417,476
1862	15,253,152	4,046,843
1863	18,816,999	

From "House Executive Documents," first session Thirty-eighth Congress, 1863–1864; Vol. IX, No 32, pp. 6–7. The years are fiscal years, ending June 30.

Pessimistic theory of taxation.................167-169
Petty, *Sir* Wm., Views on taxation..............132-134
Physiocrats, Views of, on taxation, 136..........145-147
Pitt, on the sinking fund, 324-326
Poll tax.................... 295
Price, Dr., on the sinking fund.............. ...322-324
Prices, Theory of, 63-67, 79, 83; effect of, on industry, 88-89, 98-100; on debtor class, 86-87, 94-95; falling, 91 *note*, 93-94, 100-106; rising 107-108
Prince-Smith, Views on taxation.................191-192
Prittwitz, Views on taxation, 162
Production, Tax on 265
Profits, Tax on, 149, 258-265, 276, 282-286...........213-218
Property, Tax on personal, 247-248; Tax on selling value of..............213-218
Proudhon, Views on taxation..................168-169
Public debt, Liquidation of, 313-416

Q

Quantitative theory of taxation 198-204

R

Rate (The) tax..........243-244
Rau, on a land tax, 176-177; on taxation 188-189
Raw materials exported from U. S. to Canada.......... 455
Real estate, Urban, Tax on, 219-246
Receipts, Tax on gross, 280; on net................282-286
Reciprocity Treaty of 1854, by Frederick E. Haynes, 417-486
Redemption of public debt. *See* Sinking fund.
Rent, Tax on economic, 208-209; Ricardo on... ..152-154
Resumption Act (1875)...... 37
Revenues. *See* Tariff, Taxation, Sinking fund.
Ricardo, Views on taxation, 147-148, 152-157; tax on wages, 292-294; on property tax..............214-216
Ross, Edward, Sinking Funds...............313-416

S

Sargant's "Urban Rating," *note*..................... 244
Say, J. B., Views on taxation, 180-182..............172
Shäffle, Land tax 177
Seligman, E. R. A., Shifting and incidence of taxation, 125-309
Senior, Views on taxation . 194
Sherman, I., Views on taxation..................... 167
Shifting and incidence of taxation, by E. R. A. Seligman 125-309
Silver certificates, 43, 45-47, 9-10, 22-24, 31-32......... 34
Silver dollar (The), 45, 46 *note*..................... 51
Silver Situation, The, by F. W. Taussig, 1-118; currency, 65-67; stability of, 88; issue of, 117-118; as a standard, 106-113; increase of, 108-109; amount in treasury, 21, 23, 28; circulation................15-62
Single tax, on houses, 134-136; on land, 136-140..222-224
Sinking fund (The), by E. A. Ross.................313-416
Sismondi, Views on taxation.................182-183
Smith, Adam, on taxation, 148-152.................. 275
Smith, Goldwin, on a "Commerce of Convenience"... 451
Socialistic (The) theory of incidence 197-198
Soetbeer, Prof., Index to falling prices, 91 *note;* on silver production......... 109
Specie payments, 10........ 37
Stability, Relative, of gold and silver.... 90-91
Standards of value......106-113

Statistics of trade between U. S. and Canada.....475-488
Stein, Views on taxation, 164-165.................... 173
Stewart, Dugald, on taxation, 145
Steuart, *Sir* James, on taxation..................142-145
Subsidiary coins........... 65
Sumner, Senator, and the Reciprocity Treaty of 1854 439

T

Tabular (The) Standard..111-112
Tariff between U. S. and Canada................463-465
Taussig, F. W., The Silver Situation in the U. S....1-118
Tax (A) on consumption ... 130
Tax rate............... 235-246
Taxation, The Shifting and Incidence of, by E. R. A. Seligman..............125-309
Terminable annuities, 330, 410-411 416
Thiers, A., Views on taxation 162-164
Thünen, von, on taxation, 242-243
Tithes..................212-213
Trade between U. S. and Canada...............475-486
Treasury notes, 50-53, 56, 70-71
Treaty, (The) Reciprocity of 1854..................417-486

U

U. S. notes, circulation, 45, 36-37....................47-48
U. S., The Silver Situation in, by F. W. Taussig....1-118
Urban real estate, Tax on, 219-246

V

Value of silver and gold as standards.............106-113
Vanderlint, Views on taxation...................... 140
Verri, Views on taxation... 157
Vignis, Views on taxation.. 186
von Thünen, Views on taxation..................... 187

W

Wages, Tax on, 290-294, 150-151, 154-156; rise in...... 96
Walker, F. A., on money supply........ 89
Walpole-Stanhope, on the sinking fund... 319-320
Walras, Views on taxation.. 202
War debt and the sinking fund..................378-383
Ward, Elijah, and the Reciprocity Treaty of 1854.436-437
Webb, S., On house rent, 229-230
Wells, D. A., Views on taxation....... 166
Wilson, Senator, on Reciprocity Treaty of 1854.... 444
Wolowski, Views on taxation............ 173

IMPORTS INTO CANADA FROM UNITED STATES.

	Value of Free Goods.	Dutiable Goods.	Total Imports.	Amount Duties Paid.	Rate.
1850....	791,128	5,803,732	6,594,860	1,069,814	18.43
1851 ...	1,384,030	6,981,735	8,365,765	1,274,763	18.26
1852....	861,690	7,613,003	8,477,693	1,433,195	18.82
1853....	1 125,565	10,656,582	11,782,147	1,805,812	16.94
1854....	2,083,757	13,449,341	15,533,098	2,209,173	16.42
1855....	9,379,204	11,449,472	20,828,676	1,786,032	15.60
1856...	9,933,586	12,770,923	22,704,509	2,059,826	16.13
1857....	10,258,221	9,966,430	20,224,651	1,605,164	16.10
1858 ...	7,161,958	8,473,607	15,635 565	1,611,711	19.02
1859....	8,560,055	9,032,861	17,592,916	1,825,135	20.20
1860....	8,746,799	8,526,230	17,273,029	1,759,928	20.64
1861...	12,730,768	8,338,620	25,069,388	1,584,892	19.00
1862....	19,044,374	6,128,783	25,173,157		

"House Executive Document," 1863–64, Vol. 9, No. 32, p. 8. Calendar year.

"Report of A. T. Galt, Minister of Finance," March, 1862, p. 19, except for 1862.

TOTAL IMPORT FROM CANADA AND PROVINCES.

	Free by Ordinary Laws.	Free by Treaty.	Total Free.	Paying Duty.	Total Imports.
1850....................	787,599		787,599	4,856,863	5,644,462
1851....................	1,690,052		1,690,052	5,003,070	6,693,122
1852....................	980,289		980,289	5,130,010	6,110,299
1853....................	1,418,250		1,418,250	6,132,468	7,550,718
1854....................	639,143		639,143	8,288,417	8,927,560
1855....................	906,786	7,197,337	8,104,123	7,032,611	15,136,734
1856....................	1,081,611	19,407,086	20,488,697	821,724	21,310,421
1857....................	1,016,342	20,280,210	21,296,552	827,744	22,124,296
1858....................	562,532	14,752,255	15,314,787	491,732	15,806,519
1859....................	2,609,420	16,384.416	18,963,836	733,715	19,727,551
1860....................	2,734,385	20,446,586	23.180,971	690,411	23,851,381
1861....................	2,494,997	20,047,525	22.542,522	520,411	23,062,833
1862....................	1,618,185	17,152,552	18,770,737	529,258	19,299,995
1863....................		15,780,343		872,282	

"House Executive Documents," 1863–64; Vol. 9, No. 32, p. 7; year ending June 30.

Exports from United States to Canada and Other Provinces.

Year.	Exports United States to Canada.	United States to Other Provinces.
1849	4,234,724	3,869,543
1850	5,930,821	3,618,214
1851	7,929,140	4,085,783
1852	6,717,060	3,791,956
1853	7,829,099	5,311,543
1854	17,300,706	7,266,154
1855	18,720,344	9,085,676
1856	20,883,241	8,146,108
1757	16,574,895	7,637,587
1858	17,029,254	6,622,473
1859	18,940,792	9,213,832
1860	14,083,114	8,623,214
1861	14,361,858	8,383,755
1862	12,842,504	8,236,611
1863	19,898,718	11,382,312

From "House Executive Documents," first session Thirty-eighth Congress, 1863–1864, Vol. IX, No. 32, p. 5. The years end June 30.

Year.	Imports United States from Canada.	United States from Other Provinces.
1850	4,285,470	1,358,992
1851	4,956,471	1,736,651
1852	4,589,969	1,520,330
1853	5,278,116	2,272,602
1854	6,721,539	2,206,021
1855	12,182,314	2,954,420
1856	17,488,197	3,822,224
1857	18,291,834	3,832,462
1858	11,581,571	4,224,948
1859	14,208,717	5,518,834
1860	18,861,673	4,989,708
1861	18,645,457	4,417,476
1862	15,253,152	4,046,843
1863	18,816,999	

From "House Executive Documents," first session Thirty-eighth Congress, 1863–1864; Vol. IX, No 32, pp. 6–7. The years are fiscal years, ending June 30.

LEADING EXPORTS TO BRITISH PROVINCES OTHER THAN CANADA, FROM 1849-1863.

	Wheat.	Wheat Flour.	Indian Corn.	Meal, Corn and Rye.
June 30, 1849	332,765	1,518,922	126,791	625,691
1850	214,779	1,051,546	57,731	421,112
1851	220,319	945,337	66,199	284,510
1852	165,106	688,956	86,221	187,718
1853	208,956	784,498	105,404	135,040
1854	216,266	955,484	149,688	378,295
1855	182,614	1,753,395	154 214	702,204
1856	268,959	3,120,787	136,774	631,959
1857	221,560	2,881 803	98,340	370,774
1858	132,187	2 618,913	85,210	248,420
1859	100,717	2,962,171	93,320	209,049
1860	90,049	3,044,243	85,915	206,881
1861	26,563	3,065.219	40,875	198,029
1862	16,582	3,199,208	65,358	254,182
1863	110,333	4,420,748	131,552	286,238

"House Executive Documents," 1863–1864, Vol. IX, No. 32, p. 18.

1858–1863.

MANUFACTURES EXPORTED BY UNITED STATES TO PROVINCE OF CANADA.

	1858-59.	1859-60.	1860-61.	1861-62.	1862-63.
Cotton Manufactures	$363,016	314,491	403,591	246,442	64,495
Hemp " { including Cordage,	32,762	21,971	43,664	16,378	10,565
Iron Manufactures { except Pig Iron,	761,619	716,597	839,421	773,381	395,907
Leather, Boots and Shoes	211,147	137,475	106,648	66,770	22,860
Tobacco manufactured	1,205,684	863,934	683,875	203,681	76,026
Glassware.	85,232	77,061	83,950	121,381	87,032
Earthenware	9,350	11,151	12,347	12,147	8,244
House Furniture	136,765	123,251	124,250	188,829	66,718
India-rubber Manufactures	13,217	5,936	10,158	1,151	528
Carriages	20,449	109,419	11,117	35,054	11,501
Books	154,034	79,134	106,324	62,838	25,164
Paper and Stationery	78,825	61,433	74,272	72,376	55,171
Jewelry	15,960	5,760	12,954	11,046	5,044
Hats	116,150	90,100	79,016	49,505	14,078
Tin Manufactures	15,451	20,565	4,362	1,375	
Marble & Stone Manufactures.	53,883	109,009	97,977	97,002	48,293
Trunks and Umbrellas	5,470	1,575	2,577	1,967	1,434
Clothing	9,373	16,655	11,163	8,494	1,328
Wood Manufactures	45,146	49,547	36,593	49,061	58,302
Candles and Soap	11,450	8,079	9,558	4,583	2,428
Paints and Varnish	27,1·3	32 521	39,903	39,646	30,094
Copper & Brass Manufactures	60,511	49,658	16,909	32,238	50,874
Musical Instruments	104,534	91,782	122,800	100,907	67,445
Printing Materials	1,771	3,437	5,534	4,259	1,260
Other Enumerated	21,990	5,595	12,776	8,190	4,784
Unenumerated	624,534	542,028	549,903	388,229	401,227
Total	4,185,516	3,548,114	3,501,642	2,596,930	1,510,802

This table is from report of April, 1864, "House Reports," First Session, Thirty-eighth Congress, Vol. I. 39, p. 5.

See also "House Executive Documents," First Session, Thirty-eighth Congress, 1863–1864, Vol. IX. No. 32, p. 15.

ENTERED.

Nationality of vessels employed in the carrying trade between the United States and British North American provinces :

Year.	*American.*	*Foreign Tonnage.*
1857–58 from Canada	1,240,159	1,105,356
From other B. N. A. provinces	138,640	382,712
1858–59 from Canada	1,344,717	922,920
From other B. N. A. provinces	171,024	390,926
1859–60 from Canada	1,936,955	957,063
From other B. N. A. provinces	229,749	411,432
1860–61 from Canada	2,617,276	658,036
From other B. N. A. provinces	184,062	475,051
1861–62 from Canada	1,996,892	684,879
From other B. N. A. provinces	196,709	465,141
Total	10,056,183	6,453,520

CLEARED.

Nationality of vessels employed in the carrying trade between the United States and British North American provinces :

Year.	*American.*	*Foreign Tonnage.*
1857–58 to Canada	1,133,584	1,104,650
To other B. N. A. provinces	319,985	461,245
1858–59 to Canada	1,364,580	1,012,358
To other B. N. A. provinces	242,407	475,329
1859–60 to Canada	1,982,586	1,083,566
To other B. N. A. provinces	371,257	516,646
1860–61 to Canada	2,678,276	896,124
To other B. N. A. provinces	291,812	599,430
1861-62 to Canada	2,025,670	731,123
To other B. N. A. provinces	297,172	509,928
Total	10,707,329	7,391,399

"Reports of Committee." (House) 1863–64, Vol. I, No. 39, p. 6.

Value of goods passing through the United States to Canada under bond :

1855	4,463,774
1856	4,926,922
1857	5,582,643
1858	2,057,024
1859	4,546,491
1860	3,041,877
1861	5,688,952
1862	5,508,427
1863	

"House Executive Documents." 1863–1864, Vol. IX, No. 32, p. 36, from Canadian records. The principal portion of this trade passes over the railroad line, entering Canada at Island Pond, Vermont (by the Grand Trunk).

PRINCIPAL REFERENCES.

"House Executive Documents," 1849–1850; Vol. 8, No. 64. "Message of President Taylor upon Reciprocal Trade with Canada," with correspondence, May, 1850.

"House Executive Documents," 1851–1852; Vol. 2, part 1, No. 2, pp. 83–92. "Annual Message" of President Fillmore, December, 1851; with correspondence upon commercial intercourse with Canada.

"House Executive Documents," 1852–1853; Vol. 4, No. 40. "Message" of President Fillmore transmitting "Report of the Secretary of State upon the Negotiations for Reciprocity with Canada."

"Reports of Committees," (House) 1852–53, No. 4. "Report of Committee on Commerce on Reciprocal Trade with the British North American Colonies;" with statistics and correspondence.

The *Congressional Globe*; especially Part 3, 1863–1864, May 18, 19, 24, 25 and 26, 1864; containing the principal debate in the House upon the treaty; and Part 1, 1864–1865, January 11 and 12, 1865, containing the principal debate in the Senate.

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"Report of the Minister of Finance, A. T. Galt, of Canada, upon the 'Report of the Committee on Commerce of the House of Representatives of the United States.' A reply to the preceding Report." March, 1862.

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INDEX.

VOLUME VII.

Publications of the American Economic Association.

A

Absolute (The) Theory of incidence................147-157
Act of 1878 (Bland Bill), 8-15; relation of banks to, 15-17; repealed.........50-51
Agnostic Theory of taxation, 196-7
Agricultural (The) classes and prices............100-106
Agricultural land, Tax on, 205-218
Amortization, Theory of, 170-180, 396-416; in England, 319-330; in America, 331-395
Annuities, Terminable, 330, 410-411.................. 416
Arnold, Mr. and The Reciprocity Treaty of 1854.... 438

B

Bank deposits, Effect on prices, 65-66; increase in (1878-90), 114 and *note*, 25-26; decline in (1884-5)...28-29
Bank notes, Circulation of (1878-90), 45; decline in (1886)...................40-43
Bank reserves.............. 115
Banks (The), and the Act of 1878, 15-17; N. Y. banks and gold reserve, 35-36; and the treasury notes..52-53
Baring's banking house, 56, 60
Bi-metallism, Argt's for, 84-91; objections to........91-118
Bland Bill, 8-15; relation of banks to................15-17
Blunden, Mr., Incidence of Urban rates, *note*......... 239
Bolles, A. S., Views on taxation...................... 169
British provinces. *See* Canada.
Broglie, De, Views on taxation...................... 164
Buchanan, D., Views on taxation...................... 193
Building, Tax on........242-244

C

Canada and the Reciprocity Treaty of 1854.........417-486
Canals, Canadian, Navigation of...........424, 467-473
Canard, Views on taxation, 157-161
Cantillon, Views on taxation...................... 139
Capital, Tax on..........248-257
Capitalization Theory of taxation..................170-180
Certificates, Silver. *See* Silver certificates.
Cherbuliez, Views on taxation...................161-162
Circulation of silver, 15-21; periods of..............21-62

City real estate, Tax on, 219–246
Cliffe-Leslie, on taxation, 195–196; on rent, *note*..... 242
Commerce between U. S. and Canada.......446, 450–452
Commodities, Tax on, 137–138...................266–268
Congress and the Reciprocity Treaty of 1854.........436–444
Conigliani, Views on taxation...................203–204
Convention at Detroit and Reciprocity Treaty....... 445
Courcelle Seneuil, Views on taxation................. 161
Cournot, on taxation, 176, 274-275; quantitative theory of....... 198–199
Craig, J., Views on taxation, 171; on land tax.......... 175
Credit, Effect of, on prices, 63–65; affected by money circulation.............. 79
Creditors and rising prices, 107–108
Crisis of 1890.............56–58
Crops, Effect of, on circulation of currency, 18–19, 25–26
Currency, Expansion of, 113–115
Customs receipts (1890–91, 55 and *note;* (1883–86) *note*... 30

D

Davenant, Views on taxation 139
Decker, *Sir* Matthew, Views on taxation...........135–136
Debt, Public, 33; liquidation of.....................313–416
Debtor class and falling prices, 86–87, 89-91......94–95
Depression of trade and silver circulation........28-29
Diffusion theory of taxation, 157–167
Diminishing returns, 260-262, 264 *note*, 269–270...... 273
Dollar coins, Circulation of, 19–20
Du Poynode, Views on taxation 186
Duties on Canadian imports, 461–465

E

Eclectic theory of taxation, 180–196
Elgin, Lord, and the Reciprocity Act of 1854, 426, 430–434
Erie Canal................ 471
Exports from U. S. to Canada................. 460

F

Fairchild, Plan for silver issues................117–118
Falck, G. von, Incidence of taxation, *note*............ 129
Farm land, Tax on......205–218
Farmer (The) and falling prices............ 100–106
Fauveau, Views on taxation, 199–200
Fawcett, Views on taxation, 195; *note*................. 244
Fisheries Question.......... 429
Florez-Estrada, Views on taxation...... ......207, 209
Free coinage of silver......81–82
Funding Act............344–346

G

Gallatin and the sinking fund, 370–378............ 409
Garnier, Views on taxation, 173..................183–184
Gibbon, Alex., Views on taxation................. 166
Gold, Stability of, 90; effect of premium on, 74–75; as a standard of value, 106–113; free coinage of, 82; suspension of payments in...................... 76
Gold reserve, 37-40, 73–74, 54, 66, 30-31...........34–36
Gold standard and debtor class...................86–91
Gold supply in U. S., 75 *note;* and bank reserves....115–116
Greenbacks, 32–33, 36–37, 45–48
Greg, on the land tax...... 174
Ground rents, Tax on, 223-224, 232-234, 235–239, 241-242..................... 246

H

Hamilton, Plan for a sinking fund, 353, 355–358, 362-363..................... 408